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(END OF SECTION)

## SECTION B: SUPPLIES OR SERVICES AND PRICES/COSTS

### B.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None incorporated by reference

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

None incorporated by reference

### B.2 NFS 1852.216-84 Estimated Cost and Incentive Fee (OCT 1996)

The total target cost of this contract is \$[Offeror fill-in] (Sum of Basic, Option A, and Option B).

The target cost for the Basic is \$[Offeror fill-in].

The target cost for Option A is \$[Offeror fill-in].

The target cost for Option B is \$[Offeror fill-in].

The total target fee of this contract is \$[Offeror fill-in].

Technical Performance Incentives, Delivery Incentives, and Cost Incentive represent 40%, 35%, and 25% of total target fee, respectively. Incentive fee shall be administered in accordance with Clause I.5, FAR 52.216-10 Incentive Fee and the Incentive Fee Plan in Section J-10 of the RFP.

A. Technical Performance Incentives (40% of total target fee) – *See the Incentive Fee Plan in Section J-10 of the RFP and Section L of the RFP for further instructions and calculations.*

*Note: Options A and B, clauses F.4 and F.5 of the RFP, do not correspond to the Technical Performance Incentives. Only the Basic applies.*

The total target fee for Technical Performance Incentives is %[Offeror fill-in] and \$[Offeror fill-in].

1. Technical Performance Incentive A, Reworks, Modifications, and Repairs - The target fee for Technical Performance Incentive A is %[Offeror fill-in] and \$[Offeror fill-in].
2. Technical Performance Incentive B, Data Rates –The target fee for Technical Performance Incentive B is %[Offeror fill-in] and \$[Offeror fill-in].
3. Technical Performance Incentive C, Circuit Margin –The target fee for Technical Performance Incentive C is %[Offeror fill-in] and \$[Offeror fill-in].
4. Technical Performance Incentive D, Software Functionality –The target fee for Technical Performance Incentive D is %[Offeror fill-in] and \$[Offeror fill-in].

B. Delivery Incentives (35% of Target Fee) – *See the Incentive Fee Plan in J-10 of the RFP and Section L of the RFP for further instructions and calculations.*

*Note: Options A and B, clauses F.4 and F.5 of the RFP, do not correspond to the Delivery Incentives. Only the Basic applies.*

The total target fee for Delivery Incentives is %[Offeror fill-in] and \$[Offeror fill-in].

1. Delivery Incentive A, Flight Units Sets (FUs) – The target fee for Delivery Incentive #2 is %[Offeror fill-in] and \$[Offeror fill-in].

2. Delivery Incentive B, Flight Equivalent Unit Sets (FEUs) – The target fee for Delivery Incentive #1 is %[Offeror fill-in] and \$[Offeror fill-in].

C. Cost Incentive (25% of total target fee) – *See the Incentive Fee Plan in J-10*

*Note: The Basic, Option A and Option B (clauses F.4 and F.5 of the RFP, correspond to the Cost Incentive.*

The target fee for the Basic is %[Offeror fill-in] and \$[Offeror fill-in].

The target fee for Option A is %[Offeror fill-in] and \$[Offeror fill-in].

The target fee for Option B is %[Offeror fill-in] and \$[Offeror fill-in].

The maximum fee for the Basic is %[Offeror fill-in] and \$[Offeror fill-in].

The maximum fee for Option A is %[Offeror fill-in] and \$[Offeror fill-in].

The maximum fee for Option B is %[Offeror fill-in] and \$[Offeror fill-in].

The minimum fee for the Basic is %[Offeror fill-in] and \$[Offeror fill-in].

The minimum fee for Option A is %[Offeror fill-in] and \$[Offeror fill-in].

The minimum fee for Option B is %[Offeror fill-in] and \$[Offeror fill-in].

The share ratios shall be proposed at the same rate for the Basic, Option A, and Option B.

The cost sharing for underruns is:

Government [Offeror fill-in] percent Contractor [Offeror fill-in] percent.

The cost sharing for cost overruns is:

Government [Offeror fill-in] percent Contractor [Offeror fill-in] percent.

(End of clause)

B.3 NFS 1852.232-81 Contract Funding (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$[*To be completed by Contracting Officer prior to contract award*]. This allotment is for the Common Communications for Visiting Vehicles for the International Space Station (C2V2) and covers the following contract completion date [*To be completed by Contracting Officer prior to contract award*].

(b) An additional amount of \$[*To be completed by Contracting Officer prior to contract award*] is obligated under this contract for payment of fee.

(End of clause)

(End of Section)

SECTION C: DESCRIPTION/SPECIFICATIONS/STATEMENT OF  
WORK

International Space Station (ISS)  
Common Communications  
for Visiting Vehicles  
(C2V2)

Statement of Work  
(SOW)

---



## 1. Statement of Work

This Statement of Work (SOW) defines the requirements for the design, development, test, certification, and delivery of the International Space Station (ISS) Common Communications for Visiting Vehicles System (C2V2).

### 1.1.Scope

The scope of the Contractor's tasks includes all labor, project management, supervision, materials, travel, facilities, and integration functions necessary for compliance to this SOW. The C2V2 Contractor shall design, manufacture, certify, and deliver a two-way communications system that provides ISS to Visiting Vehicle (VV) communication coverage for the required data types throughout rendezvous, departure, attached, and proximity operations as specified in this SOW. The Contractor shall deliver flight-certified hardware and software and associated ground support equipment, including training hardware, engineering units, functional equivalent units, and qualification units. The Contractor shall perform all work necessary to satisfy the requirements in this SOW.

The scope of this SOW is described below:

- **C2V2 System** includes all flight equipment deliverables plus associated Ground Support Equipment (GSE), documentation, and integration activities for both the ISS and VV:
  - The **ISS-C2V2** includes the ISS operational configuration. It consists of the following:
    - **ISS-C2V2 Orbital Replaceable Units (ORUs)** which include those items delivered by the Contractor for installation on the ISS and associated ground facilities under the **Basic Contract**.
    - **ISS-C2V2 Radio Frequency (RF) cables** which includes all RF cables delivered by the Contractor for installation in the ISS and use on the ground under **Option A, RF Cable Option**.
    - **ISS-C2V2 Interfacing Assemblies** which includes all non-RF interfacing cables and structures provided by NASA-JSC for interfacing the C2V2 to the ISS. The Contractor is responsible under the basic contract for integrating with the NASA-JSC teams to ensure compatibility across all ISS to C2V2 interfaces.
  - The **VV-C2V2** includes all items delivered by the Contractor for installation in the VV. The design, development, and engineering unit deliveries of the VV-C2V2 through completion of the critical design phase are included in the **Basic Contract**. The VV-C2V2 flight unit deliveries and associated documentation are included as part of **Option B, VV-C2V2 Option**, as designated in this SOW.

Figure SOW-1 depicts the high-level C2V2 project scope.

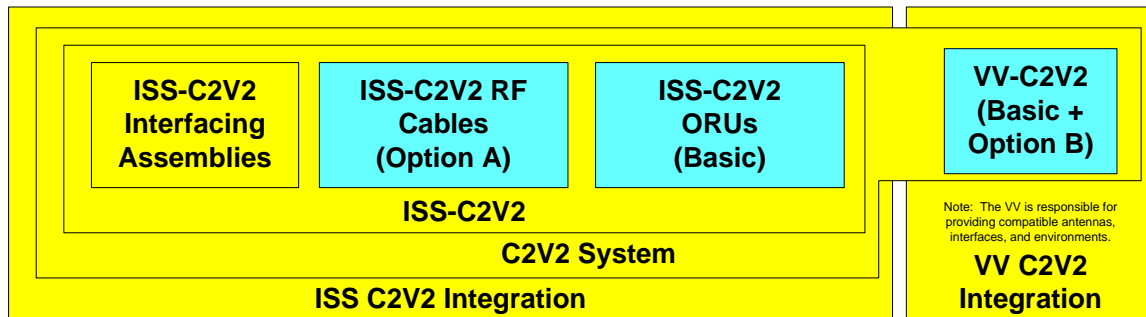


Figure SOW-1: C2V2 Project Scope.

## 1.2. System Description

The C2V2 is a two-way communications system for use between the ISS and Visiting Vehicles (VVs) during rendezvous, proximity, departure, and docked operations.

Space Station Program (SSP) Document 50808 (SSP 50808), ISS to Commercial Orbital Transportation Services (COTS) Interface Requirements Document (IRD), defines the requirement for two-way communications between the ISS and VVs. Communication is required to provide the following primary data exchanges:

- Two-way audio between crewmembers on the ISS and the VV for crewed VVs
- VV and ISS navigation data exchange for all VVs
- Commands from the ISS to the VV for uncrewed VVs
- Other two-way data exchanges for situational awareness and to support vehicle operations

The C2V2 must provide communications coverage throughout the required VV trajectories and during docked operations for all identified docking ports and trajectories. The C2V2 requirements were derived from the concept of operations documented in JSC 65991, Concept of Operations (ConOps) for the International Space Station Common Communications for Visiting Vehicles (C2V2) System.

## 2. Requirements

### 2.1. Project and Contract Management

#### 2.1.1. Project and Contract Management Plan

The Contractor shall plan, organize, control, and report on all activities required by this contract to assure accomplishment of all outcomes and deliverable products required by this contract. The Contractor shall provide overall contract management and administration for this contract.

The Contractor shall perform all business and administrative functions and integrate these functions across all areas of performance. The Contractor's on-going business analysis shall support the ISS Program business process.

The contractor shall submit a project and contract management plan in accordance with Data Requirements Document (DRD) DRD-C2V2-03, Management Plan.

### **2.1.2. Contract Work Breakdown Structure (CWBS)**

The Contractor shall develop, provide, and maintain a contract CWBS dictionary per the Contract WBS and Dictionary contained in DRD-C2V2-03, Management Plan. The CWBS shall serve as the framework for contract planning, budgeting, cost reporting, schedule resource loading, and schedule status reporting to the ISS Program. The NASA C2V2 project CWBS is included in Sections J-1 through J-3, NASA C2V2 Project WBS.

### **2.1.3. Financial Reporting**

The Contractor shall utilize a contract financial system which discretely tracks resources by fund source, CWBS, and elements of cost including direct labor, materials, overhead, other direct costs including but not limited to travel and subcontracts, and indirect costs. The Contractor shall provide inputs to NASA-JSC budget processes (e.g., program planning, budgeting, and execution budget calls - but not limited to), and special requests for budget impacts. The Contractor shall provide financial reporting in accordance with the DRD-C2V2-08, NF533 Monthly Cost Reporting.

### **2.1.4. Contract Performance**

The Contractor shall use an earned value measurement system in accordance with clause NFS 1852.234-2, Earned Value Management System ALT 1. The Contractor shall provide a contract performance report per DRD-C2V2-10, Monthly Project Report.

### **2.1.5. Schedules**

The Contractor shall develop, maintain and deliver an Integrated Master Schedule (IMS) and a high-level project schedule in accordance with DRD-C2V2-04, Contract Schedules.

### **2.1.6. Integrated Data Environment**

The Contractor shall implement an integrated data environment to support effective communication and timely exchange of information. The Contractor shall submit data in electronic format by posting it to the NASA-JSC Electronic Document Management System (EDMS) per Contract Section J-8. The Contractor shall establish and maintain an account to gain logical access to NASA-JSC Information Technology (IT) systems including completion of required IT training.

### **2.1.7. Meetings and Reviews**

#### **2.1.7.1. Meetings**

##### **2.1.7.1.1. Contract Kickoff Meeting**

The Contractor shall conduct a Contract kick-off meeting at the Contractor's facility within thirty (30) calendar days after contract award. Teleconference capability is to be provided by the organization hosting the meeting. Key project personnel from both NASA-JSC and the Contractor shall participate.

The purpose of the meeting is to review all top level requirements, communications plan, IDE, POCs, WBS, data requirements content, all deliverables, IMS, and milestone reviews plans.

#### **2.1.7.1.2. Teleconferences**

The Contractor shall participate in a weekly status teleconference with NASA-JSC that includes the following:

- Status of previous week's activities
- Planned activities for current week
- Contractor required inputs from NASA-JSC
- NASA-JSC required inputs from Contractor
- New issue identification and description
- Action status changes
- Special topics as request by the COTR or Contractor project manager

#### **2.1.7.1.3. Technical Interchange Meetings**

The Contractor shall participate in quarterly Technical Interchange Meetings (TIMs) at NASA as defined in DRD-C2V2-14, Integration Products.

#### **2.1.7.1.4. Participation in Other Meetings**

The Contractor shall participate in monthly NASA-called technical meetings with the providers of the ISS-C2V2 Interfacing Assemblies and the integration teams as defined in DRD-C2V2-14, Integration Products.

### **2.1.7.2. Milestone Reviews**

#### **2.1.7.2.1. C2V2 Milestone Reviews**

For each hardware and software deliverable item type, the Contractor shall conduct the milestone reviews identified below per the schedule provided in contract Section J-List of Documents, Exhibits, and Other Attachments, and generate review data packages in accordance with the DRD-C2V2-13, Hardware and Software Life Cycle Reviews. In accordance with required delivery schedules, configuration items may be combined into single reviews.

- Contractor Specification Requirements Review
- Preliminary Design Review (PDR)
- Critical Design Review (CDR)
- Acceptance Review (AR)

The Contractor shall conduct a Functional Configuration Audit/Physical Configuration Audit (FCA/PCA) per DRD-C2V2-18, FCA/PCA for each flight unit configuration item.

For each qualification and flight hardware and software (as applicable) configuration item, the Contractor shall allow NASA-JSC participation in the following Contractor-conducted reviews:

- Flight Manufacturing Readiness Review (MRR)
- Qualification and Acceptance Test Readiness Reviews (TRRs)
- Pre-ship reviews

#### **2.1.7.2.2. Participation in Other Reviews**

The Contractor shall provide inputs to and participate in NASA-ISS C2V2 reviews associated with the C2V2 project. The Contractor shall allow NASA participation in Subcontractor reviews including the submittal of action and review items. The Contractor shall review and provide inputs to ISS-C2V2 Interfacing Assemblies specifications in accordance with DRD-C2V2-14, Integration Products.

#### **2.1.7.3. Project Management Reviews (PMRs)**

The Contractor shall conduct quarterly PMRs and provide monthly integrated management review products in accordance with DRD-C2V2-11, PMR Package, for the work performed on this contract. The reviews shall provide the ISS Program insight into the Contractor's and Subcontractors' overall technical, schedule, and cost performance.

### **2.1.8. Configuration Management (CM)**

The Contractor shall utilize, implement, and operate a configuration management (CM) system in accordance with the requirements defined in SSP 41170, ISS Program Configuration Management Requirements. The Contractor shall support a NASA-JSC review of the Contractor's CM system and procedures to assess compliance to SSP 41170. The Contractor shall develop and maintain a CM Plan in accordance with DRD-C2V2-06, Configuration Management Plan.

### **2.1.9. Risk Management**

The Contractor shall conduct regular risk assessments of cost, schedule, and performance requirements. This includes the following:

- Identify project cost, schedule, and performance risks
- Perform risk assessment using techniques included in the risk management process
- Analyze risk level ratings and prioritize risks for follow-on handling

The Contractor shall submit a risk management plan in accordance with DRD-C2V2-03, Management Plan.

### **2.1.10. System Engineering Management**

The Contractor shall prepare, implement, deliver, and maintain a Systems Engineering Management Plan (SEMP) as addressed in DRD-C2V2-03, Management Plan. The Contractor shall utilize a technical management approach that provides NASA-JSC information on design modification decisions and their impact on performance of the C2V2 system.

### **2.1.11. Export Control Management**

The Contractor shall comply with the export control requirements in accordance with NASA Federal Acquisition Regulations Supplement clause 1852.225-70, Export Licenses.

### **2.1.12. Information Technology**

The Contractor shall develop and implement an IT Management Plan per the DRD-C2V2-07, IT Security Management Plan and Reports.

### **2.1.13. Communications Security**

The Contractor shall meet National Security Agency's Communications Security (ComSec) requirements for handling, storage, tracking, and shipment of ComSec material in accordance with issuances of the Committee on National Security Systems (see [www.cnss.gov](http://www.cnss.gov)). The Contractor shall complete the required training and certification to handle the ComSec device and demonstrate compliance to the applicable security requirements. This Contractor shall have a ComSec account and custodian. NASA-JSC is responsible for obtaining keying material and the key management plan.

## **2.2.Safety and Mission Assurance**

### **2.2.1. S&MA Management**

The Contractor shall develop, maintain, and implement a Safety and Mission Assurance (S&MA) Plan in accordance with DRD-C2V2-03, Management Plan.

### **2.2.2. Safety and Health Program**

The Contractor's safety and health program shall comply with NASA Federal Acquisition Regulations (FAR) Supplement clause 1852.223-72, Safety and Health (Short Form).

### **2.2.3. Safety Requirements**

The Contractor shall perform and deliver safety assessments for all hardware and software sustained and developed on this contract in accordance with SSP 30599, Safety Review Process; SSP 30309, Safety Analysis and Risk Assessment Requirements; SSP 50021, Safety Requirements Document; SSP 50038, Computer Based Control System Safety Requirements Document; and DRD-C2V2-22, Safety Analysis and Hazard Reports.

### **2.2.4. Reliability and Maintainability**

The Contractor shall develop, maintain and deliver the Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL) Report and worksheets in accordance with SSP 30234, Failure Modes and Effects Analysis and Critical Items List Requirements for Space Station, and the DRD-C2V2-23, Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL), for hardware developed or sustained under this contract.

### **2.2.5. Quality Assurance**

The Contractor shall develop, implement and maintain a quality assurance plan per Contract Section E.2. The Contractor shall provide a quality plan in accordance with DRD-C2V2-21, Quality Plan.

The Contractor shall establish and maintain a Quality Management System (QMS) that complies with the Society of Aerospace Engineers (SAE) Aerospace Standard AS9100C, Quality Management Systems – Requirements for Aviation, Space and Defense Organizations. The Contractor shall report, promote and participate in the investigation and resolution of applicable problems in accordance with SSP 41173, Space Station Quality Assurance Requirements, and SSP 30223, International Space Station Problem Reporting and Corrective Action (PRACA).

Contractor-developed hardware and software shall be accepted in accordance with SSP 50287, Hardware/Software Acceptance Process. The Contractor shall provide an Acceptance Data Package (ADP) in accordance with SSP 30695, ADP Requirements Specification, and the DRD-C2V2-20, ADP for Contractor-developed hardware. The Contractor shall maintain the ADP for hardware and software sustained or maintained on the contract prior to delivery to NASA-JSC or whenever the hardware or software is in the possession of the Contractor.

## **2.3.C2V2 system**

### **2.3.1. Technical characteristics**

The Contractor shall provide a C2V2 system that meets the requirements of SSP 50930, ISS C2V2 Prime Item Development Specification (PIDS).

#### ***2.3.1.1. Design and Manufacturing requirements***

The Contractor shall design a C2V2 system that meets all applicable requirements of the following ISS documents:

- SSP 50835, ISS Pressurized Volume Hardware Common Interface Requirements Document (CIRD), for launch, stowage, and transportation environments
- SSP 41000, System Specification for the ISS

The Contractor shall design C2V2 Ground Support Equipment (GSE) that meets the applicable requirements of the following ISS documents:

- SSP 50004, Ground Support Equipment Design Requirements International Space Station

#### ***2.3.1.2. Non-proprietary interfaces***

All Contractor interfaces between the ISS-C2V2 and the VV-C2V2 including the Radio Frequency (RF) characteristics shall be non-proprietary and fully defined and documented at the CDR such that the VV provider has the option to independently obtain a compatible interfacing communication device.

#### ***2.3.1.3. Software Tools and Operating System***

The Contractor shall use non-proprietary, commercially available software development tools and operating system for any on-orbit reprogrammable software developed by the Contractor and contained within the C2V2 flight unit deliverables.

#### ***2.3.1.4. Frequency Authorization***

NASA, through its JSC frequency manager, will obtain frequency authorization from the National Telecommunications and Information Administration (NTIA). The Contractor shall support these NTIA frequency authorization activities by providing technical review of and inputs to the authorization

requests in accordance with DRD-C2V2-14, Integration Products. The frequencies utilized for C2V2 are not final until NTIA frequency authorization is approved. The approved frequencies will be documented in SSP 50930, ISS C2V2 PIDS. The Contractor shall ensure frequency management requirements, policies and procedures, and RF allocation and assigned authorizations are properly followed.

#### ***2.3.1.5. Communications Security***

The contractor shall design the C2V2 for removal of the ComSec materials for ground transportation and testing of the C2V2 system with all capabilities enabled except data encryption and decryption and without ComSec handling restrictions.

### **2.3.2. Deliverables**

#### ***2.3.2.1. Data***

The Contractor shall complete and deliver data products in accordance with the Data Requirements List (DRL) and DRDs contained in contract Section J-11 of the RFP, List of Documents, Exhibits, and Other Attachments.

#### ***2.3.2.2. Hardware and software***

The Contractor shall deliver the C2V2 hardware and software items specified below in section 2.3.2 Deliverables and in Sections J-4 and J-5. The Contractor shall prepare configuration item specifications for each deliverable per DRD-C2V2-12, Contractor Specifications and Interface Documents.

##### ***2.3.2.2.1. Qualification and flight units***

The Contractor shall design and build the C2V2 qualification and flight units in accordance with this SOW and the requirements specified in SSP 50930, ISS C2V2 PIDS hereafter referred to as the C2V2 PIDS.

Both the Qualification Units (QUs) shall be Class I equipment as defined in section J-5 of the RFP. The QU and FU design shall be configuration controlled. The QUs and FUs shall be manufactured under quality control per the approved quality plan with complete records of unit manufacturing, testing, shipping and handling.

##### ***2.3.2.2.2. Engineering units***

The Engineering Units (EUs) shall meet C2V2 PIDS technical requirements identified at PDR as requiring demonstration prior to CDR.

The EU refers to the hardware, firmware, and software that are functionally equivalent to the flight unit. This unit is used for proof of concept testing and early integration testing with the ISS interfacing systems. The EU is a contract deliverable to NASA-JSC, and the Contractor shall maintain the EU and its development environment throughout the life of this contract.

##### ***2.3.2.2.3. Functional equivalent units***

The Flight Equivalent Units (FEUs) shall meet the performance requirements in the C2V2 PIDS. Environmental workmanship testing is not required but may be performed as a means of refining final flight build and test procedures. The Contractor shall document all differences between the FEUs and



the FUs. Equivalent parts and processes can be only used if agreed to by the COTR/CO prior to FEU drawing release.

The FEU refers to the hardware, firmware, and software that are functionally equivalent to the flight unit. This unit is used for testing of the detailed design and early integration testing with the ISS interfacing systems. It may be used for verification credit after CDR with quality controls as defined in the approved verification plan(s). The FEU is a contract deliverable to NASA-JSC. The Contractor shall maintain the FEU and its development environment throughout the duration of this contract.

#### **2.3.2.2.4. Training units**

The training units shall be form and fit identical to the flight units. The training units will be used for fit checks in ISS mock-ups and for crew training of the on-orbit installation procedures. The C2V2 mock-ups needed for Neutral Buoyancy Laboratory crew training will be provided by NASA based on the Contractor's Computer-Aided Design (CAD) models, per the DRD-C2V2-14, Integration Products and DRD-C2V2-15, Engineering Drawings, Models, and Associated Lists, provided by the C2V2 Contractor.

#### **2.3.2.2.5. Ground support equipment**

GSE shall be capable of supporting operations and maintenance, including unit functional checkout, configuration, and diagnostics. The GSE shall include the necessary components to emulate all external electrical and data interfaces, perform stand-alone testing and operation of the unit, and display quick look data for configuration or checkout. GSE and associated equipment specifications shall be provided in accordance with DRD-C2V2-12, Contractor Specifications and Interface Documents.

#### **2.3.2.2.6. Spares**

Spares shall be provided to ensure the C2V2 remains functional for specified lifetime requirements as defined in the C2V2 PIDS. Additional or replacement parts for the FUs or the FEUs shall also be provided to mitigate parts obsolescence risks.

#### **2.3.2.2.7. Software and Firmware**

Flight and non-flight software, source code, firmware, development environment specifications, and the documentation necessary to test, verify, operate, and service the EU, FEU, FU, QU, and GSE shall be delivered along with the appropriate hardware deliveries. Non-flight software shall be capable of unit configuration and problem diagnosis. Firmware and software shall be delivered in its native format, along with a complete description of the firmware development environment and specifications.

The flight software shall meet the requirements of the C2V2 PIDS. Flight software documentation shall be delivered per the DRD-C2V2-19, Version Description Document (VDD), DRD-C2V2-12, Contractor Specifications and Interface Documents, DRD-C2V2-13, Hardware and Software Life Cycle Reviews, and DRD-C2V2-20, ADP.

### **2.3.3. Delivery**

#### **2.3.3.1. Hardware**

Packaging, handling, transportation, and marking shall be in accordance with the contract Section D-Packaging and Marking.

#### ***2.3.3.2. Software***

The Contractor shall deliver on-orbit modifiable software to the ISS Mission Build Facility (MBF) in accordance with MBF delivery requirements defined in SSP 50482, ISS Software Management Plan, Section 5.

### **2.3.4. Operations and Sustaining**

#### ***2.3.4.1. Post DD250 (Material Inspection and Receiving Report) Delivery***

The Contractor shall sustain all hardware and software deliverables until formal transition of sustaining responsibility to the ISS sustaining teams per the DRD-C2V2-04, Contract Schedules. The Contractor shall support mission operations for installation, check-out, and first operational use of C2V2 per the milestones identified in contract Section J-List of Documents, Exhibits, and Other Attachments.

Post DD-250 of the flight software and prior to formal transition of sustaining engineering, the Contractor shall perform software changes as required in accordance with SSP 41170, ISS Program Configuration Management Requirements.

#### ***2.3.4.2. Sustaining Transition***

The Contractor shall transition the sustaining engineering, logistics, and maintenance roles to the applicable ISS teams per the milestone schedule in Contract Section F. The Contractor shall provide the products and data required to support repair transition per SSP 50276, Depot/Manufacturing Facility Certification Plan. The Contractor shall include the data content and delivery formats necessary to transition the sustaining engineering role to NASA-JSC.

### **2.4.ISS Integration**

The Contractor shall coordinate with the software development, data integration, vehicle, operations, quality, configuration management, and safety teams as required for integration of C2V2 into the ISS baseline and operations. The Contractor shall perform integrated ISS-C2V2 testing at NASA-JSC for validation and verification of the following ISS-C2V2 interfaces: (1) 120 VDC power interfaces, (2) Mil-Std-1553B remote terminal interfaces, (3) Ethernet interfaces, and (4) ISS software interfaces. The Contractor shall provide integration products in accordance with the DRD-C2V2-14, Integration Products.

### **2.5.VV Integration**

The Contractor shall coordinate with the VV provider on C2V2 related matters. The Contractor shall support one VV integrated test post-delivery of the VV-C2V2 engineering unit under the basic contract and two VV integrated tests post-delivery of the VV-C2V2 FEUs and post-delivery of the VV-C2V2 FUs under the Contract Option B. The Contractor shall provide inputs to and review of VV documentation related to C2V2 integration and utilization in accordance with DRD-C2V2-14, Integration Products.

## 2.6.Value Characteristics

The C2V2 size, weight, power, and information data rate value characteristics, as proposed in contract Section L, shall be incorporated into the Contractor flight unit deliverable specifications.

The contractor shall complete the following (Do not include those items that are not applicable):

- 1) The C2V2 *[insert deliverable name]* dimensions (size) shall be less than or equal to *[insert dimensions – length, width, and height]*. *(Repeat for as many items as applicable)*
- 2) The C2V2 *[insert deliverable name]* mass shall be less than or equal to *[insert mass]*. *(Repeat for as many items as applicable.)*
- 3) The C2V2 *[insert deliverable name]* power shall be less than or equal to *[insert power]*. *(Repeat for as many items as applicable.)*
- 4) The C2V2 maximum return link information data rate shall be *[insert information data rate]*.

(End of Section)

## SECTION D: PACKAGING AND MARKING

### D.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None incorporated by reference

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

None incorporated by reference

### D.2 NFS 1852.211-70 Packaging, Handling, and Transportation (SEP 2005)

(a) The Contractor shall comply with NASA Procedural Requirements (NPR) 6000.1, "Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components", as may be supplemented by the statement of work or specifications of this contract, for all items designated as Class I, II, or III.

(b) The Contractor's packaging, handling, and transportation procedures may be used, in whole or in part, subject to the written approval of the Contracting Officer, provided (1) the Contractor's procedures are not in conflict with any requirements of this contract, and (2) the requirements of this contract shall take precedence in the event of any conflict with the Contractor's procedures.

(c) The Contractor must place the requirements of this clause in all subcontracts for items that will become components of deliverable Class I, II, or III items.

(End of clause)

(End of Section)

## SECTION E: INSPECTION AND ACCEPTANCE

### E.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

FAR 52.246-3 Inspection of Supplies - Cost-Reimbursement (MAY 2001)
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#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

None incorporated by reference

### E.2 52.246-11 Higher-Level Contract Quality Requirement (FEB 1999)

The Contractor shall comply with the higher-level quality standards selected below.

<u>Title</u>	<u>Number</u>	<u>Tailoring</u>
Space Station Program Document, Space Station Quality Assurance Requirements	SSP 41173 Rev. D	None
Space Station Program Document, Problem Reporting and Corrective Action	SSP 30223 Rev. L	None
Quality Management Systems – Requirements for Aviation, Space and Defense Organizations	AS9100 Rev. C	None

(End of clause)

### E.3 NFS 1852.246-72 Material Inspection and Receiving Report (AUG 2003)

(a) At the time of each delivery to the Government under this contract, the Contractor shall furnish a Material Inspection and Receiving Report (DD Form 250 series) prepared in four (4) copies, an original and three (3) copies.

(b) The Contractor shall prepare the DD Form 250 in accordance with NASA FAR Supplement 1846.6. The Contractor shall enclose the copies of the DD Form 250 in the package or seal them in a waterproof envelope, which shall be securely attached to the exterior of the package in the most protected location.

(c) When more than one package is involved in a shipment, the Contractor shall list on the DD Form 250, as additional information, the quantity of packages and the package numbers. The Contractor shall forward the DD Form 250 with the lowest numbered package of the shipment and print the words "CONTAINS DD FORM 250" on the package.

(End of clause)

(End of Section)

## SECTION F: DELIVERIES OR PERFORMANCE

### F.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

FAR 52.247-34 F.O.B. Destination (NOV 1991)
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#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

None incorporated by reference

### F.2 FAR 52.242-15 Stop-Work Order (AUG 1989) - ALT I (APR 1984)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either -

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Termination clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected, and the contract shall be modified, in writing, accordingly, if -

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(End of clause)

### F.3 Contract Completion Date

The contract completion date is the first of the following to occur:

(1) 30 days after the first on-orbit operational use

or

(2) 30 days after all items in Section J-5 are delivered (whichever item is delivered last)

(End of clause)

### F.4 Optional Units A for Radio Frequency Cables

1. The Government reserves the right, at its sole option, to require the Contractor to provide the Radio Frequency (RF) cables at the following cost, incentive fee, and delivery schedule.

The last date by which this option can be exercised is sixty (60) days from contract award [TBD].

<b>Estimated Cost</b>	<b>Incentive Fee</b>	<b>Delivery Date</b>
TBD	TBD	TBD

2. If the Government exercises the option as provided for herein, the resultant contract shall include terms and conditions of the contract as it exists immediately prior to the exercise of the option, except for the changes described below:

- A. The estimated cost and incentive fee set forth in clause B.2, Estimated Cost and Incentive Fee, will be increased by the values set forth above.
- B. Section J-5 of the RFP will be updated to incorporate these items and the delivery set forth above.
- C. Section C, 2.3.2 Deliverables, will be updated to incorporate these items and the delivery set forth above.

3. Exercise of the option, if accomplished, will be effected through issuance of a contract modification by the Contracting Officer. The Contracting Officer will provide written notice of such action to the Contractor at least thirty (30) days prior to the issuance of the modification.



#### F.5 Optional Units A for Visiting Vehicle Flight Units

1. The Government reserves the right, at its sole option, to require the Contractor to provide the Visiting Vehicles (VVs) Flight Units (FUs) at the following cost, incentive fee, and delivery schedule.

The last date by which this option can be exercised is sixty (60) days after completion of the Critical Design Review (CDR) milestone [TBD] listed in Section J-4, *Contract Milestone Reviews and Delivery Schedule*.

<b>Estimated Cost</b>	<b>Incentive Fee</b>	<b>Delivery Date</b>
TBD	TBD	TBD

2. If the Government exercises the option as provided for herein, the resultant contract shall include terms and conditions of the contract as it exists immediately prior to the exercise of the option, except for the changes described below:

- A. The estimated cost and incentive fee set forth in clause B.2, Estimated Cost and Incentive Fee, will be increased by the values set forth above.
- B. Section J-5 of the RFP will be updated to incorporate these items and the delivery set forth above.
- C. Section C, 2.3.2 Deliverables, will be updated to incorporate these items and the delivery set forth above.

3. Exercise of the option, if accomplished, will be effected through issuance of a contract modification by the Contracting Officer. The Contracting Officer will provide written notice of such action to the Contractor at least thirty (30) days prior to the issuance of the modification.

(End of clause)

#### F.6 Place of Performance

The place of performance (or places of performance) for this contract will be [Offeror fill-in]

(End of clause)

#### F.7 Deliverables

The contractor shall make all deliverables as described in Section C Statement of Work, Section J-4, *Contract Milestone Reviews and Delivery Schedule s*, and Section J-5, *Contract Deliverables*, of the RFP.

(End of clause)

#### F.8 Delivery Instructions

(a) The Contractor shall ship the items required under this contract to:

NASA Johnson Space Center  
Central Receiving  
Bldg. 420  
Houston, TX 77058

Marked for: Penny Roberts/OD  
Contract Number: NNJ11GA43C  
Building No.: S920A/1004

(b) Unless otherwise authorized in advance by the Contracting Officer, deliveries under this contract shall be made between the hours of 8 a.m. and 3:30 p.m., Monday through Friday, excluding Federal holidays.

(c) Additional delivery instructions:

If the delivery is scheduled before the hours of 8 a.m. or after the hours of 3:30 p.m. or if there are any other special delivery circumstances, the Contracting Officer shall be given an advance notice of at least 24 hours.

(d) Additional marking instructions:

The contractor shall follow the instructions in Clauses F.7 and D.2 of the RFP.

(End of clause)

**F.9 JSC 52.247-95 Flight Item (SEP 1989) (JSC Procurement Instruction)**

Block 16 of each Department of Defense Form 250 prepared for hardware or equipment to be shipped under this contract must be annotated as follows in ¼ inch letters or larger by hand printing or rubber stamp:

**“THIS IS A FLIGHT ITEM” OR “THIS IS MISSION ESSENTIAL GROUND SUPPORT EQUIPMENT,”** as applicable.

(End of Clause)

(End of Section)

## SECTION G: CONTRACT ADMINISTRATION DATA

### G.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None included by reference

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

NFS 1852.227-70 New Technology (MAY 2002)
NFS 1852.242-73 NASA Contractor Financial Management Reporting (NOV 2004)
NFS 1852.245-70(JAN 2011) – ALT I Contractor Requests for Government-Provided Property (JAN 2011)
NFS 1852.245-73 Financial Reporting of NASA Property in the Custody of Contractors (JAN 2011)
NFS 1852.245-75 Property Management Changes (JAN 2011)
NFS 1852.245-78 Physical Inventory of Capital Personal Property (JAN 2011)

### G.2 NFS 1852.216-87 Submission of Vouchers for Payment (MAR 1998)

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is indicated below. Public vouchers for payment of costs shall include a reference to the number of this contract.

(b) (1) If the contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

NASA Shared Services Center (NSSC)  
Financial Management Division (FMD) – Accounts Payable  
Bldg 1111, C. Road  
Stennis Space Center, MS 39529  
Phone#: 1-877-677-2123  
Fax: 1-866-209-5415  
Email: NSSC-AccountsPayable@nasa.gov

(2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.

(3) Copies of vouchers should be submitted as directed by the Contracting Officer.

(c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:

One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's attachment to:

*To be Filled out by Offeror*

DCAA Office:

Supervisory Auditor:

Address:

Phone #:

Fax:

Email:

(2) Five copies of SF 1034, SF 1035A, or equivalent Contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:

(i) Copy 1 NASA Contracting Officer

(ii) Copy 2 Auditor

(iii) Copy 3 Contractor

(iv) Copy 4 Contract administration office; and

(v) Copy 5 Project management office.

(3) The Contracting Officer may designate other recipients as required.

(d) Public vouchers for payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and be forwarded to:

NASA Shared Services Center (NSSC)  
Financial Management Division (FMD) – Accounts Payable  
Bldg 1111, C. Road  
Stennis Space Center, MS 39529  
Phone#: 1-877-677-2123  
Fax: 1-866-209-5415  
Email: NSSC-AccountsPayable@nasa.gov

This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.

(e) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.

(End of clause)

### G.3 NFS 1852.242-70 Technical Direction (SEP 1993)

(a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NASA FAR Supplement 1842.270. "Technical direction" means a directive to the Contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction to the Contractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements in Section C of this contract.

(b) The COTR does not have the authority to, and shall not, issue any instruction purporting to be technical direction that -

- (1) Constitutes an assignment of additional work outside the statement of work;
- (2) Constitutes a change as defined in the changes clause;
- (3) Constitutes a basis for any increase or decrease in the total estimated contract cost, the fixed fee (if any), or the time required for contract performance;
- (4) Changes any of the expressed terms, conditions, or specifications of the contract; or
- (5) Interferes with the contractor's rights to perform the terms and conditions of the contract.

(c) All technical direction shall be issued in writing by the COTR.

(d) The Contractor shall proceed promptly with the performance of technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the Contractor's opinion, any instruction or direction by the COTR falls within any of the categories defined in paragraph (b) of this clause, the Contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the Contractor in writing within 30 days that the instruction or direction is -

(1) Rescinded in its entirety; or

(2) Within the requirements of the contract and does not constitute a change under the changes clause of the contract, and that the Contractor should proceed promptly with its performance.

(e) A failure of the contractor and contracting officer to agree that the instruction or direction is both within the requirements of the contract and does not constitute a change under the changes clause, or a failure to agree upon the contract action to be taken with respect to the instruction or direction, shall be subject to the Disputes clause of this contract.

(f) Any action(s) taken by the contractor in response to any direction given by any person other than the Contracting Officer or the COTR shall be at the Contractor's risk.

(End of clause)

G.4 NFS 1852.245-71 Installation-Accountable Government Property (JAN 2011) - ALT I (JAN 2011)

(a) The Government property described in paragraph (c) of this clause may be made available to the Contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property unless authorized by the Contracting Officer under (b)(1)(iv). Under this clause, the Government retains accountability for, and title to the property, and the Contractor shall comply with the following:

- NASA Procedural Requirements (NPR) 4100.1, NASA Materials Inventory Management Manual;
- NASA Procedural Requirements (NPR) 4200.1, NASA Equipment Management Procedural Requirements;
- NASA Procedural Requirement (NPR) 4300.1, NASA Personal Property Disposal Procedural Requirements;
- Johnson Space Center Work Instruction (JWI) 4210.2, JSC Instructions for Control of Program Stock

Property not recorded in NASA property systems must be managed in accordance with the requirements of the clause at FAR 52.245-1, as incorporated in this contract. The Contractor shall establish and adhere to a system of written procedures to assure continued, effective management control and compliance with these user responsibilities. In accordance with FAR 52.245-1(h)(1) the contractor shall be liable for property lost, damaged, destroyed or stolen by the contractor or their employees when determined responsible by a NASA Property Survey Board, in accordance with the NASA guidance in this clause.

(b)(1) The official accountable recordkeeping, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished within NASA management information systems prescribed by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the Contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:

(i) The Contractor shall not utilize the installation's central receiving facility for receipt of contractor-acquired property. However, the Contractor shall provide lists suitable for establishing accountable records of all such property received, on a monthly basis, to the SEMO.

(ii) The Contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area.

(iii) The Contractor shall establish a record for Government titled property as required by FAR 52.245-1, as incorporated in this contract, and shall maintain that record until accountability is accepted by the Government.

(iv) Contractor use of Government property at an off-site location and off-site subcontractor use requires advance approval of the Contracting Officer and notification of the Industrial Property Officer. The property shall be considered Government furnished and the Contractor shall assume accountability and financial reporting responsibility. The Contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR

52.245-1, Government Property (as incorporated in this contract), until its return to the installation. NASA Procedural Requirements related to property loans shall not apply to offsite use of property by contractors.

(2) After transfer of accountability to the Government, the Contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in paragraph (a) of this clause and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the Contracting Officer.

(c) The following property and services are provided if checked:

☐ Office space, work area space, and utilities. Government telephones are available for official purposes only.

☐ Office furniture.

☒ Property listed in Attachment J-6, Installation Provided Government Facilities

(i) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records.

(ii) The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

☐ Supplies from stores stock.

☐ Publications and blank forms stocked by the installation.

☐ Safety and fire protection for Contractor personnel and facilities.

☐ Installation service facilities: [Insert the name of the facilities or "none"].

☐ Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.

☐ Cafeteria privileges for Contractor employees during normal operating hours.

☐ Building maintenance for facilities occupied by Contractor personnel.

☐ Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services may be provided on-site, as approved by the Contracting Officer.

(End of clause)

#### G.5 NFS 1852.245-74 Identification and Marking of Government Equipment (JAN 2011)

(a) The Contractor shall identify all equipment to be delivered to the Government using NASA Technical Handbook (NASA-HDBK) 6003, "Application of Data Matrix Identification Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques", and NASA Standard (NASA-STD) 6002, "Applying Data Matrix Identification Symbols on Aerospace Parts". This includes deliverable equipment listed in the schedule and other equipment when NASA directs physical transfer to NASA or a third party. The Contractor shall identify property in both machine and human readable form unless the use of a machine readable-only format is approved by the NASA Industrial Property Officer.

(b) Property shall be marked in a location that will be human readable, without disassembly or movement of the property, when the items are placed in service unless such placement would have a deleterious effect on safety or on the item's operation.

(c) Concurrent with equipment delivery or transfer, the Contractor shall provide the following data in an electronic spreadsheet format:

(1) Item Description.

(2) Unique Identification Number (License Tag).

(3) Unit Price.

(4) An explanation of the data used to make the unique identification number.

(d) For items physically transferred under paragraph (a) the following additional data is required:

(1) Date originally placed in service.

(2) Item condition.

(3) Date last serviced.

(e) The data required in paragraphs (c) and (d) shall be delivered to the NASA center receiving activity listed below:

NASA Johnson Space Center  
Building 420  
Attn; Central Receiving  
2101 NASA Parkway  
Houston, TX 77058

(f) The contractor shall include the substance of this clause, including this paragraph (f), in all subcontracts that require delivery of equipment.

(End of Clause)



G.6 NFS 1852.245-76 List of Government Property Furnished Pursuant to FAR 52.245-1 (JAN 2011)

For performance of work under this contract, the Government will make available Government property identified below on a no charge-for-use basis pursuant to the clause at FAR 52.245-1, Government Property, as incorporated in this contract. The Contractor shall use this property in the performance of this contract at contractor facilities and at other location(s) as may be approved by the Contracting Officer. Under FAR 52.245-1, the Contractor is accountable for the identified property.

Possible Government Furnished Property:

**Hardware:**

- Communications Security (ComSec) Device - Upon the Contractor's request, the ComSec device may be supplied by NASA-JSC to the Contractor.
- ComSec Material – Upon the Contractor's request, ComSec material will be supplied by NASA-JSC to the contractor.
- ISS Multiplexer/Demultiplexer (MDM) Test Environment - If required, NASA-JSC may provide an MDM Application Test Environment (MATE) for use by the vendor during C2V2-MDM interface development and testing.

(End of clause)

(End of Section)

## SECTION H: SPECIAL CONTRACT REQUIREMENTS

### H.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None included by reference

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

NFS 1852.208-81 Restrictions on Printing and Duplicating (NOV 2004)
NFS 1852.223-75 Major Breach of Safety or Security (FEB 2002)
NFS 1852.228-76 Cross-Waiver of Liability for International Space Station Activities (Deviation) (OCT 2009)

### H.2 NFS 1852.223-72 Safety and Health Plan (Short Form) (APR 2002)

(a) Safety is the freedom from those conditions that can cause death, injury, occupational illness; damage to or loss of equipment or property, or damage to the environment. NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.

(b) The Contractor shall take all reasonable safety and occupational health measures consistent with standard industry practice in performing this contract. The Contractor shall comply with all Federal, State, and local laws applicable to safety and occupational health and with the safety and occupational health standards, specifications, reporting requirements, and any other relevant requirements of this contract.

(c) The Contractor shall take, or cause to be taken, any other safety, and occupational health measures the Contracting Officer may reasonably direct. To the extent that the Contractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this contract, the equitable adjustment shall be determined pursuant to the procedures of the Changes clause of this contract; provided, that no adjustment shall be made under this Safety and Health clause for any change for which an equitable adjustment is expressly provided under any other clause of the contract.

(d) The Contracting Officer may notify the Contractor in writing of any noncompliance with this clause and specify corrective actions to be taken. In situations where the Contracting Officer becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including Contractor employees working on NASA contracts), or high value mission critical equipment or property, the Contracting Officer shall notify the Contractor orally, with written confirmation. The Contractor shall promptly take and report any necessary corrective action. The Government may pursue appropriate remedies in the event the Contractor fails to promptly take the necessary corrective action.

(e) The Contractor (or subcontractor or supplier) shall insert the substance of this clause, including this paragraph (e) and any applicable Schedule provisions, with appropriate changes of designations of the parties, in subcontracts of every tier that exceed the micro-purchase threshold.

(End of clause)

### H.3 NFS 1852.209-71 Limitation of Future Contracting (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of prospective Offerors is invited to [FAR Subpart 9.5](#)--Organizational Conflicts of Interest.

(b) The nature of this conflict is [*Offeror to describe with response to DRD-C2V2-01, Organizational Conflicts of Interest (OCI) Avoidance Plan*].

(c) The restrictions upon future contracting are as follows:

(1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this contract.

(2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and as long as these data remain proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

(End of clause)

### H.4 NFS 1852.225-70 Export Licenses (FEB 2000)

(a) The Contractor shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the Contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.

(b) The Contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at NASA Johnson Space Center, where the foreign person will have access to export-controlled technical data or software.

(c) The Contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(d) The Contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

(End of clause)

**H.5 JSC 52.219-90 Small Business Subcontracting Goals (OCT 2006) (JSC Procurement Instruction)**

For purposes of this clause, the terms, “HUBZone Small Business Concern,” “Small Disadvantaged Business Concern,” “Service-Disabled, Veteran-Owned Small Business Concern,” “Veteran-Owned Small Business Concern,” “Women-Owned Small Business Concern,” and “Historically Black College or University (HBCU)” are defined in paragraph 2.101 of the Federal Acquisition Regulation.

The total small business goal, expressed as a percent of “**TOTAL CONTRACT VALUE**” including options, is 16 percent. The small business percentage goal, includes the following goals expressed as a percent of “**TOTAL CONTRACT VALUE**”:

Small Disadvantaged Business Concerns	5 percent
Woman-Owned Small Business Concerns	5 percent
HUBZone Small Business Concerns	1 percent
Veteran-Owned Small Business Concern	1 percent
Service-Disabled, Veteran-Owned Small Business Concern	1/2 percent
HBCU’s (includes other minority institutions)	1 percent

(End of clause)

**H.6 JSC 52.242-94 Administrative Leave (SEP 2008) (JSC Procurement Instruction)**

(a) When the NASA installation grants administrative leave to its Government employees (e.g., as a result of inclement weather, potentially hazardous conditions, or other special circumstances), the following personnel should also be dismissed upon notification of a center closure provided by the Contracting Officer: Contractor personnel working on-site; and Contractor personnel dedicated to the contract effort who are working off-site within 10 miles of JSC; and unable to perform their NASA contract duties at their off-site location because their normal place of business has been or is expected to be negatively impacted by an emergency situation (e.g. has sustained damage, has been evacuated, etc.). However, the contractor shall provide sufficient on-site personnel to perform round-the-clock requirements of critical work already in process, unless otherwise instructed by the Contracting Officer or authorized representative.

(b) Administrative leave granted under this clause shall be subject to modification or termination by the Contracting Officer and in all instances shall be subject to the availability of funds. The cost of salaries and wages to the Contractor for the period of any such excused absence shall be a reimbursable item of cost under this contract for effected employees in accordance with the Contractor's established accounting policy.

1. If a labor hour-based contract, administrative leave granted under this clause shall be accounted for consistent with productive hours under this contract for employees in accordance with the Contractor's established accounting policy.

2. For fixed price contracts based on other than labor hours for deliverables, the Contracting Officer and Contractor shall as a precondition to any reimbursement negotiate an advanced agreement to determine the appropriate method in which to grant administrative leave under this clause.

3. All invoices requesting payment under this clause shall be marked as “Administrative Leave in accordance with 52.242-94, Administrative Leave.” All such invoices paid will be subject to review, audit, and revision when routine operations re-commence.

(c) The Contractor shall include this clause in all services subcontracts that include personnel in the categories described in (a) above.

(End of Clause)

#### H.7 Associate Contractor Agreement for ISS

(a) The success of the International Space Station (ISS) Program is dependent on the efforts of multiple contractors. The C2V2 contractor is a key participant. The other contracts of the key participating contractors include, but are not limited to:

- Program Integration and Control (PI&C) Contract
- Cargo Mission Contract (CMC)
- United States On-Orbit Segment (USOS) Completion and Sustaining Engineering Contract

Under the aforementioned contracts the contractors will provide the necessary technical, engineering and processing products and services required to develop, operate, maintain and utilize the ISS.

(b) In order to achieve efficient and effective implementation of the operation and utilization phase of the ISS, the contractor shall establish the means for coordination and exchange of information with associate contractors. The information to be exchanged shall be that required by the contractors in the execution of their respective contract requirements. The contractors are strongly encouraged to seek out and foster cooperative efforts that will benefit the ISS Program with increased safety, efficiency, and productivity.

(c) Given the unique role of this contract, and interrelations with the development, operation, maintenance and utilization of the ISS, the contractor will engage in cooperative relationships that facilitate effective management of the overall ISS effort.

(d) To ensure successful implementation and utilization of the ISS, the contractors shall establish formal guidelines to address coordination, cooperation and communication. All program elements shall work in a coordinated fashion. Each contractor shall establish the means for the exchange of such data as needed to keep other project elements fully informed.

(End of clause)

## H.8 ISS Contract Strategy Conflict of Interest Agreement

(a) An organizational conflict of interest exists for this contract as it relates to the contracts awarded as part of the overall ISS Contract Strategy in that the contractor may be in a position to favor its own products or capabilities. Two of the contracts to be awarded will be responsible for support to ISS Program Management. These two contracts are the Program Integration and Control Contract and the Mission Integration Contract. The other contracts to be awarded will be responsible for the overall implementation of these Program requirements. The intent of this clause is to prohibit a contractor from developing Program requirements in one of the aforementioned two contracts designed for “Support to ISS Program Management” and also implementing those requirements in one of the additional contracts responsible for “ISS Program Implementation.” Therefore, the contractor, by signing this contract, fully understands, agrees, and will comply with the following conditions:

(1) The contractor will not perform work as a prime for the ISS follow-on contract responsible for ISS Program requirements.

(2) The contractor will perform no more than 49% (total contract costs) of the work as a subcontractor under any of the requirements contracts.

(3) The contractor shall not, and will not, make the day-to-day program management decisions under any of the requirements contracts set forth in (a)(1).

(b) If by the performance of this contract, or by any other means, the contractor believes they may violate any of these conditions above, the contractor shall notify the Contracting Officer in writing immediately.

(End of clause)

(End of Section)

## SECTION I: CONTRACT CLAUSES

### I.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

FAR 52.202-1 Definitions (JUL 2004)
FAR 52.203-3 Gratuities (APR 1984)
FAR 52.203-5 Covenant Against Contingent Fees (APR 1984)
FAR 52.203-6 Restrictions on Subcontractor Sales to the Government (SEP 2006)
FAR 52.203-7 Anti-Kickback Procedures (OCT 2010)
FAR 52.203-8 Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
FAR 52.203-10 Price or Fee Adjustment for Illegal or Improper Activity (JAN 1997)
FAR 52.203-12 Limitation on Payments to Influence Certain Federal Transactions (OCT 2010)
FAR 52.203-13 Contractor Code of Business Ethics and Conduct (APR 2010)
FAR 52.203-14 Display of Hotline Poster(s) (DEC 2007)
FAR 52.204-2 Security Requirements (AUG 1996)
FAR 52.204-4 Printed or Copied Double-Sided on Recycled Paper (MAY 2011)
FAR 52.204-7 Central Contractor Registration (APR 2008)
FAR 52.204-9 Personal Identity Verification of Contractor Personnel (JAN 2011)
FAR 52.204-10 Reporting Executive Compensation and First-Tier Subcontract Awards (JUL 2010)
FAR 52.209-6 Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (DEC 2010)
FAR 52.210-1 Market Research (APR 2011)
FAR 52.211-5 Material Requirements (AUG 2000)
FAR 52.215-2 Audit and Records – Negotiation (OCT 2010)
FAR 52.215-8 Order of Precedence - Uniform Contract Format (OCT 1997)
FAR 52.215-10 Price Reduction for Defective Certified Cost or Pricing Data (AUG 2011)
FAR 52.215-11 Price Reduction for Defective Certified Cost or Pricing Data Modifications (AUG 2011)
FAR 52.215-12 Subcontractor Certified Cost or Pricing Data (OCT 2010)
FAR 52.215-13 Subcontractor Certified Cost or Pricing Data – Modifications (OCT 2010)

FAR 52.215-14 Integrity of Unit Prices (OCT 2010)
FAR 52.215-15 Pension Adjustments and Asset Reversions (OCT 2010)
FAR 52.215-17 Waiver of Facilities Capital Cost of Money (OCT 1997)
FAR 52.215-18 Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other Than Pensions (JUL 2005)
FAR 52.215-21 Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data – Modifications (OCT 2010)
FAR 52.215-23 Limitations on Pass-Through Charges (OCT 2009)
FAR 52.216-7 Allowable Cost and Payment (JUN 2011)
FAR 52.217-7 Option for Increased Quantity- Separately Priced Line Item (MAR 1989)
FAR 52.219-4 Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 2011)
FAR 52.219-8 Utilization of Small Business Concerns (JAN 2011)
FAR 52.219-9 Small Business Subcontracting Plan (JAN 2011 – ALT II (OCT 2001)
FAR 52.219-16 Liquidated Damages - Subcontracting Plan (JAN 1999)
FAR 52.219-28 Post-Award Small Business Program Representation (APR 2009)
FAR 52.222-1 Notice to the Government of Labor Disputes (FEB 1997)
FAR 52.222-19 Child Labor - Cooperation with Authorities and Remedies (JUL 2010)
FAR 52.222-20 Walsh-Healey Public Contracts Act (OCT 2010)
FAR 52.222-21 Prohibition of Segregated Facilities (FEB 1999)
FAR 52.222-26 Equal Opportunity (MAR 2007)
FAR 52.222-35 Equal Opportunity for Veterans (SEP 2010)
FAR 52.222-36 Affirmative Action for Workers with Disabilities (OCT 2010)
FAR 52.222-37 Employment Reports on Veterans (SEP 2010)
FAR 52.222-40 Notification of Employee Rights Under the National Labor Relations Act (DEC 2010)
FAR 52.222-50 Combating Trafficking in Persons (FEB 2009)
FAR 52.222-54 Employment Eligibility Verification (JAN 2009)
FAR 52.223-6 Drug-Free Workplace (MAY 2001)
FAR 52.223-18 Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011)
FAR 52.225-1 Buy American Act – Supplies (FEB 2009)
FAR 52.225-13 Restrictions on Certain Foreign Purchases (JUN 2008)
FAR 52.225-25 Prohibition on Engaging in Sanctioned Activities Relating to Iran-Certification (SEP 2010)



FAR 52.227-1 Authorization and Consent (DEC 2007)
FAR 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement (DEC 2007)
FAR 52.227-11 Patent Rights – Ownership by the Contractor (DEC 2007)
FAR 52.227-14 Rights in Data General (DEC 2007) – ALT II and III(DEC 2007)
FAR 52.227-16 Additional Data Requirements (JUN 1987)
FAR 52.227-23 Rights to Proposal Data (Technical) (JUN 1987)
FAR 52.228-7 Insurance-Liability to Third Persons (MAR 1996)
FAR 52.230-2 Cost Accounting Standards (OCT 2010)
FAR 52.232-17 Interest (OCT 2010)
FAR 52.232-18 Availability of Funds (APR 1984)
FAR 52.232-22 Limitation of Funds (APR 1984)
FAR 52.232-23 Assignment of Claims (JAN 1986)
FAR 52.232-25 Prompt Payment (OCT 2008)
FAR 52.232-33 Payment by Electronic Funds Transfer – Central Contractor Registration (OCT 2003)
FAR 52.233-1 Disputes (JUL 2002) – ALT I (DEC 1991)
FAR 52.233-3 Protest after Award- ALT I (JUN 1985)
FAR 52.233-4 Applicable Laws for Breach of Contract Claim (OCT 2004)
FAR 52.242-1 Notice of Intent to Disallow Costs (APR 1984)
FAR 52.242-2 Production Progress Reports (APR 1991)
FAR 52.242-3 Penalties for Unallowable Costs (MAY 2001)
FAR 52.242-4 Certification of Final Indirect Costs (JAN 1997)
FAR 52.242-13 Bankruptcy (JUL 1995)
FAR 52.243-2 Changes - Cost-Reimbursement (AUG 1987)
FAR 52.244-2 Subcontracts (OCT 2010)
FAR 52.244-5 Competition in Subcontracting (DEC 1996)
FAR 52.244-6 Subcontracts for Commercial Items (DEC 2010)
FAR 52.245-1 Government Property (AUG 2010)
FAR 52.245-9 Use and Charges (AUG 2010)
FAR 52.246-23 Limitation of Liability (FEB 1997)
FAR 52.246-24 Limitation of Liability - High-Value Items (FEB 1997)
FAR 52.247-1 Commercial Bill of Lading Notations (FEB 2006)
FAR 52.247-63 Preference for U.S.-Flag Air Carriers (JUN 2003)
FAR 52.248-1 Value Engineering (OCT 2010)
FAR 52.249-6 Termination (Cost-Reimbursement) (MAY 2004)
FAR 52.249-14 Excusable Delays (APR 1984)
FAR 52.253-1 Computer Generated Forms (JAN 1991)

NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

NFS 1852.203-70 Display of Inspector General Hotline Posters (JUN 2001)
NFS 1852.219-74 Use of Rural Area Small Businesses (SEP 1990)
NFS 1852.219-75 Small Business Subcontracting Reporting (MAY 1999)
NFS 1852.219-77 NASA Mentor-Protégé Program (MAY 2009)
NFS 1852.219-79 Mentor Requirements and Evaluation (MAY 2009)
NFS 1852.227-11 Patent Rights – Retention by the Contractor (Short Form)(NO DATE)
NFS 1852.227-14 Rights in Data – General (NO DATE)

I.2 FAR 52.204-1 Approval of Contract (DEC 1989)

This contract is subject to the written approval of the Procurement Officer, Debra Johnson, and shall not be binding until so approved.

(End of clause)

I.3 FAR 52.209-9 Updates of Publicly Available Information Regarding Responsibility Matters (JAN 2011)

(a) The Contractor shall update the information in the Federal Awardee Performance and Integrity Information System (FAPIS) on a semi-annual basis, throughout the life of the contract, by posting the required information in the Central Contractor Registration database at <http://www.ccr.gov/>.

(b)(1) The Contractor will receive notification when the Government posts new information to the Contractor's record.

(2) The Contractor will have an opportunity to post comments regarding information that has been posted by the Government. The comments will be retained as long as the associated information is retained, i.e., for a total period of 6 years. Contractor comments will remain a part of the record unless the Contractor revises them.

(3)(i) Public requests for system information posted prior to April 15, 2011, will be handled under Freedom of Information Act procedures, including, where appropriate, procedures promulgated under E.O. 12600.

(ii) As required by section 3010 of Public Law 111-212, all information posted in FAPIS on or after April 15, 2011, except past performance reviews, will be publicly available.

(End of clause)

I.4 FAR 52.215-19 Notification of Ownership Changes (OCT 1997)

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall -

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

(c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

I.5 FAR 52.216-10 Incentive Fee (JUN 2011)

(a) *General.* The Government shall pay the Contractor for performing this contract a fee determined as provided in this contract.

(b) *Target cost and target fee.* The target cost and target fee specified in the Schedule are subject to adjustment if the contract is modified in accordance with paragraph (d) of this clause.

(1) "Target cost," as used in this contract, means the estimated cost of this contract as initially negotiated, adjusted in accordance with paragraph (d) of this clause.

(2) "Target fee," as used in this contract, means the fee initially negotiated on the assumption that this contract would be performed for a cost equal to the estimated cost initially negotiated, adjusted in accordance with paragraph (d) of this clause.

(c) Withholding of payment.

(1) Normally, the Government shall pay the fee to the Contractor as specified in the Schedule. However, when the Contracting Officer considers that performance or cost indicates that the Contractor will not achieve target, the Government shall pay on the basis of an appropriate lesser fee. When the Contractor demonstrates that performance or cost clearly indicates that the

Contractor will earn a fee significantly above the target fee, the Government may, at the sole discretion of the Contracting Officer, pay on the basis of an appropriate higher fee.

(2) Payment of the incentive fee shall be made as specified in the Schedule; provided that the Contracting Officer withholds a reserve not to exceed 15 percent of the total incentive fee or \$100,000, whichever is less, to protect the Government's interest. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of an adequate certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(d) *Equitable adjustments.* When the work under this contract is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.

(e) Fee payable.

(1) The fee payable under this contract shall be the target fee increased by \_\_\_\_\_ [*To be inserted by Contracting Officer prior to award*] cents for every dollar that the total allowable cost is less than the target cost or decreased by \_\_\_\_\_ [*To be inserted by Contracting Officer prior to award*] cents for every dollar that the total allowable cost exceeds the target cost. In no event shall the fee be greater than \_\_\_\_\_ [*Contracting Officer to insert percentage prior to award*] percent or less than \_\_\_\_\_ [*Contracting Officer to insert percentage prior to award*] percent of the target cost.

(2) The fee shall be subject to adjustment, to the extent provided in paragraph (d) of this clause, and within the minimum and maximum fee limitations in paragraph (e)(1) of this clause, when the total allowable cost is increased or decreased as a consequence of—

(i) Payments made under assignments; or

(ii) Claims excepted from the release as required by paragraph (h)(2) of the Allowable Cost and Payment clause.

(3) If this contract is terminated in its entirety, the portion of the target fee payable shall not be subject to an increase or decrease as provided in this paragraph. The termination shall be accomplished in accordance with other applicable clauses of this contract.

(4) For the purpose of fee adjustment, "total allowable cost" shall not include allowable costs arising out of—

(i) Any of the causes covered by the Excusable Delays clause to the extent that they are beyond the control and without the fault or negligence of the Contractor or any subcontractor;

(ii) The taking effect, after negotiating the target cost, of a statute, court decision, written ruling, or regulation that results in the Contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;

(iii) Any direct cost attributed to the Contractor's involvement in litigation as required by the Contracting Officer pursuant to a clause of this contract, including furnishing evidence and information requested pursuant to the Notice and Assistance Regarding Patent and Copyright Infringement clause;

(iv) The purchase and maintenance of additional insurance not in the target cost and required by the Contracting Officer, or claims for reimbursement for liabilities to third persons pursuant to the Insurance Liability to Third Persons clause;

(v) Any claim, loss, or damage resulting from a risk for which the Contractor has been relieved of liability by the Government Property clause; or

(vi) Any claim, loss, or damage resulting from a risk defined in the contract as unusually hazardous or as a nuclear risk and against which the Government has expressly agreed to indemnify the Contractor.

(5) All other allowable costs are included in "total allowable cost" for fee adjustment in accordance with this paragraph (e), unless otherwise specifically provided in this contract.

(f) *Contract modification.* The total allowable cost and the adjusted fee determined as provided in this clause shall be evidenced by a modification to this contract signed by the Contractor and Contracting Officer.

(g) *Inconsistencies.* In the event of any language inconsistencies between this clause and provisioning documents or Government options under this contract, compensation for spare parts or other supplies and services ordered under such documents shall be determined in accordance with this clause.

(End of clause)

#### I.6 FAR 52.252-2 Clauses Incorporated by Reference (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): For Federal Acquisition Regulation (FAR) clauses, see

<http://www.acqnet.gov/far/>

For NASA FAR Supplement (NFS) clauses, see  
<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

(End of clause)

#### I.7 FAR 52.252-6 Authorized Deviations in Clauses (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any NASA Federal Acquisition Regulation Supplement (48 CFR Chapter 18) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

I.8 NFS 1852.204-76 Security Requirements for Unclassified Information Technology Resources (JAN 2011)

(a) The contractor shall protect the confidentiality, integrity, and availability of NASA Electronic Information and IT resources and protect NASA Electronic Information from unauthorized disclosure.

(b) This clause is applicable to all NASA contractors and sub-contractors that process, manage, access, or store unclassified electronic information, to include Sensitive But Unclassified (SBU) information, for NASA in support of NASA's missions, programs, projects and/or institutional requirements. Applicable requirements, regulations, policies, and guidelines are identified in the Applicable Documents List (ADL) provided as an attachment to the contract. The documents listed in the ADL can be found at: <http://www.nasa.gov/offices/ocio/itsecurity/index.html>. For policy information considered sensitive, the documents will be identified as such in the ADL and made available through the Contracting Officer.

(c) Definitions.

(1) IT resources means any hardware or software or interconnected system or subsystem of equipment, that is used to process, manage, access, or store electronic information.

(2) NASA Electronic Information is any data (as defined in the Rights in Data clause of this contract) or information (including information incidental to contract administration, such as financial, administrative, cost or pricing, or management information) that is processed, managed, accessed or stored on an IT system(s) in the performance of a NASA contract.

(3) IT Security Management Plan--This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract. Unlike the IT security plan, which addresses the IT system, the IT Security Management Plan addresses how the contractor will manage personnel and processes associated with IT Security on the instant contract.

(4) IT Security Plan--this is a FISMA requirement; see the ADL for applicable requirements. The IT Security Plan is specific to the IT System and not the contract. Within 30 days after award, the contractor shall develop and deliver an IT Security Management Plan to the Contracting Officer; the approval authority will be included in the ADL. All contractor personnel requiring physical or logical access to NASA IT resources must complete NASA's annual IT Security Awareness training. Refer to the IT Training policy located in the IT Security Web site at <https://itsecurity.nasa.gov/policies/index.html>.

(d) The contractor shall afford Government access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases, and personnel used in performance of the contract. Access shall be provided to the extent required to carry out a program of IT inspection (to include vulnerability testing), investigation and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA Electronic Information or to the function of IT systems operated on behalf of NASA, and to preserve evidence of computer crime.

(e) At the completion of the contract, the contractor shall return all NASA information and IT resources provided to the contractor during the performance of the contract in accordance with retention documentation available in the ADL. The contractor shall provide a listing of all NASA Electronic information and IT resources generated in performance of the contract. At that time, the contractor shall request disposition instructions from the Contracting Officer. The Contracting Officer will provide disposition instructions within 30 calendar days of the contractor's request.

Parts of the clause and referenced ADL may be waived by the contracting officer, if the contractor's ongoing IT security program meets or exceeds the requirements of NASA Procedural Requirements (NPR) 2810.1 in effect at time of award. The current version of NPR 2810.1 is referenced in the ADL. The contractor shall submit a written waiver request to the Contracting Officer within 30 days of award. The waiver request will be reviewed by the Center IT Security Manager. If approved, the Contractor Officer will notify the contractor, by contract modification, which parts of the clause or provisions of the ADL are waived.

(f) The contractor shall insert this clause, including this paragraph in all subcontracts that process, manage, access or store NASA Electronic Information in support of the mission of the Agency.

(End of clause)

#### I.9 NFS 1852.215-84 Ombudsman (OCT 2003)

An ombudsman has been appointed to hear and facilitate the resolution of concerns from Offerors, potential Offerors, and contractors during the pre-award and post-award phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the contracting officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution.

If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman:

NASA Johnson Space Center  
Melanie Saunders/AC  
2101 NASA Parkway  
Houston, TX 77058  
Phone: 281-483-0490  
Email: Melanie.Saunders-1@NASA.gov

Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA ombudsman, the Director of the Contract Management Division, at 202-358-0445, facsimile 202-358-3083, e-mail at [Agency-procurementombudsman@nasa.gov](mailto:Agency-procurementombudsman@nasa.gov). Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

(End of clause)

I.10 NFS 1852.219-76 NASA 8 Percent Goal (JUL 1997)

(a) Definitions.

"Historically Black Colleges or University," as used in this clause, means an institution determined by the Secretary of Education to meet the requirements of 34 CFR Section 608.2. The term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

"Minority institutions," as used in this clause, means an institution of higher education meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)) which for the purposes of this clause includes a Hispanic-serving institution of higher education as defined in section 316(b)(1) of the Act (20 U.S.C. 1059c(b)(1)).

"Small disadvantaged business concern," as used in this clause, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

"Women-owned small business concern," as used in this clause, means a small business concern (1) which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women, and (2) whose management and daily business operations are controlled by one or more women.

(b) The NASA Administrator is required by statute to establish annually a goal to make available to small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns, at least 8 percent of NASA's procurement dollars under prime contracts or subcontracts awarded in support of authorized programs, including the space station by the time operational status is obtained.

(c) The contractor hereby agrees to assist NASA in achieving this goal by using its best efforts to award subcontracts to such entities to the fullest extent consistent with efficient contract performance.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as small disadvantaged business concerns, Historically Black Colleges and Universities, minority institutions, and women-owned small business concerns.

(End of clause)



I.11 NFS 1852.234-2 Earned Value Management System (NOV 2006) - ALT I (NOV 2006)

(a) In the performance of this contract, the Contractor shall use -

(1) An Earned Value Management System (EVMS) that has been determined by the Cognizant Federal Agency to be compliant with the EVMS guidelines specified in the American National Standards Institute (ANSI) /Electronic Industries Alliance (EIA) - 748 Standard, Industry Guidelines for Earned Value Management Systems (current version at the time of award) to manage this contract; and

(2) Earned Value Management procedures that provide for generation of timely, accurate, reliable, and traceable information for the Contract Performance Report (CPR) required by the contract.

(b) If, at the time of award, the Contractor's EVMS has not been determined by the Cognizant Federal Agency to be compliant with the EVMS guidelines, or the Contractor does not have an existing cost/schedule control system that is compliant with the guidelines in the ANSI/EIA-748 Standard (current version at the time of award), the Contractor shall apply the system to the contract and shall take timely action to implement its plan to be compliant with the guidelines. The Government will not formally validate/accept the Contractor's EVMS with respect to this contract. The use of the Contractor's EVMS for this contract does not imply Government acceptance of the Contractor's EVMS for application to future contracts. The Government will monitor compliance through routine surveillance.

(c) The Government will conduct Integrated Baseline Reviews (IBRs). Such reviews shall be scheduled and conducted as early as practicable, and if a pre-award IBR has not been conducted, a post-award IBR should be conducted within 180 calendar days after contract award, or the exercise of significant contract options, or within 60 calendar days after distribution of a supplemental agreement that implements a significant funding realignment or effects a significant change in contractual requirements (e.g., incorporation of major modifications). The objective of IBRs is for the Government and the Contractor to jointly assess the Contractor's baseline to be used for performance measurement to ensure complete coverage of the statement of work, logical scheduling of the work activities, adequate resourcing, and identification of inherent risks.

(d) Unless a waiver is granted by the Cognizant Federal Agency, Contractor proposed EVMS changes require approval of the Cognizant Federal Agency prior to implementation. The Cognizant Federal Agency shall advise the Contractor of the acceptability of such changes within 30 calendar days after receipt of the notice of proposed changes from the Contractor. If the advance approval requirements are waived by the Cognizant Federal Agency, the Contractor shall disclose EVMS changes to the Cognizant Federal Agency at least 14 calendar days prior to the effective date of implementation.

(e) The Contractor agrees to provide access to all pertinent records and data requested by the Contracting Officer or a duly authorized representative. Access is to permit Government surveillance to ensure that the Contractor's EVMS complies, and continues to comply, with the EVMS guidelines referenced in paragraph (a) of this clause, and to demonstrate-

(1) Proper implementation of the procedures generating the cost and schedule information being used to satisfy the contract data requirements;

(2) Continuing application of the accepted company procedures in satisfying the CPR required by the contract through recurring program/project and contract surveillance; and

(3) Implementation of any corrective actions identified during the surveillance process.

(f) The Contractor shall be responsible for ensuring that its subcontractors, identified below, comply with the EVMS requirements of this clause as follows:

(1) For subcontracts with an estimated dollar value of \$50M or more, the following subcontractors shall comply with the requirements of this clause.

*[Contracting Officer to insert names of subcontractors or subcontracted effort prior to contract award]*

(2) For subcontracts with an estimated dollar value of less than \$50M, the following subcontractors shall comply with the requirements of this clause except for the requirement in paragraph (b), if applicable, to obtain compliance/validation.

*[Contracting Officer to insert names of subcontractors or subcontracted effort prior to contract award]*

(g) If the contractor identifies a need to deviate from the agreed baseline by working against an Over Target Baseline (OTB) or Over Target Schedule (OTS), the contractor shall submit to the Contracting Officer a request for approval to begin implementation of an OTB or OTS. This request shall include a top-level projection of cost and/or schedule growth, whether or not performance variances will be retained, and a schedule of implementation for the reprogramming adjustment. The Government will approve or deny the request within 30 calendar days after receipt of the request. Failure of the Government to respond within this 30-day period constitutes approval of the request. Approval of the deviation request does not constitute a change, or the basis for a change, to the negotiated cost or price of this contract, or the estimated cost of any undefinitized contract actions.

(End of clause)

#### I.12 NFS 1852.237-72 Access to Sensitive Information (JUN 2005)

(a) As used in this clause, "sensitive information" refers to information that a contractor has developed at private expense, or that the Government has generated that qualifies for an exception to the Freedom of Information Act, which is not currently in the public domain, and which may embody trade secrets or commercial or financial information, and which may be sensitive or privileged.

(b) To assist NASA in accomplishing management activities and administrative functions, the Contractor shall provide the services specified elsewhere in this contract.

(c) If performing this contract entails access to sensitive information, as defined above, the Contractor agrees to -

(1) Utilize any sensitive information coming into its possession only for the purposes of performing the services specified in this contract, and not to improve its own competitive position in another procurement.

- (2) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.
  - (3) Allow access to sensitive information only to those employees that need it to perform services under this contract.
  - (4) Preclude access and disclosure of sensitive information to persons and entities outside of the Contractor's organization.
  - (5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.
  - (6) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.
  - (7) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.
- (d) The Contractor will comply with all procedures and obligations specified in its Organizational Conflicts of Interest Avoidance Plan, which this contract incorporates as a compliance document.
- (e) The nature of the work on this contract may subject the Contractor and its employees to a variety of laws and regulations relating to ethics, conflicts of interest, corruption, and other criminal or civil matters relating to the award and administration of government contracts. Recognizing that this contract establishes a high standard of accountability and trust, the Government will carefully review the Contractor's performance in relation to the mandates and restrictions found in these laws and regulations. Unauthorized uses or disclosures of sensitive information may result in termination of this contract for default, or in debarment of the Contractor for serious misconduct affecting present responsibility as a government contractor.
- (f) The Contractor shall include the substance of this clause, including this paragraph (f), suitably modified to reflect the relationship of the parties, in all subcontracts that may involve access to sensitive information

(End of clause)

#### I.13 NFS 1852.237-73 Release of Sensitive Information (JUN 2005)

- (a) As used in this clause, "Sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.
- (b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the

course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

(c) (1) The Contractor shall identify any sensitive information submitted in support of this proposal or in performing this contract. For purposes of identifying sensitive information, the Contractor may, in addition to any other notice or legend otherwise required, use a notice similar to the following:

Mark the title page with the following legend:

This proposal or document includes sensitive information that NASA shall not disclose outside the Agency and its service providers that support management activities and administrative functions. To gain access to this sensitive information, a service provider's contract must contain the clause at NFS 1852.237-72, Access to Sensitive Information. Consistent with this clause, the service provider shall not duplicate, use, or disclose the information in whole or in part for any purpose other than to perform the services specified in its contract. This restriction does not limit the Government's right to use this information if it is obtained from another source without restriction. The information subject to this restriction is contained in pages *[insert page numbers or other identification of pages]*. Mark each page of sensitive information the Contractor wishes to restrict with the following legend:

Use or disclosure of sensitive information contained on this page is subject to the restriction on the title page of this proposal or document.

(2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.

(d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:

(1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.

(2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.

(3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(4) Allow access to sensitive information only to those employees that need it to perform services under its contract.

(5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider's organization.

(6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to safeguard it from unauthorized use and disclosure.

(7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.

(f) This clause does not affect NASA's responsibilities under the Freedom of Information Act.

(g) The Contractor shall insert this clause, including this paragraph (g); suitably modified to reflect the relationship of the parties, in all subcontracts that may require the furnishing of sensitive information.

(End of clause)

(End of Section)

## SECTION J: LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

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J.1

## C2V2 Project WBS

The NASA C2V2 Project WBS is depicted in Figure SOW-2.

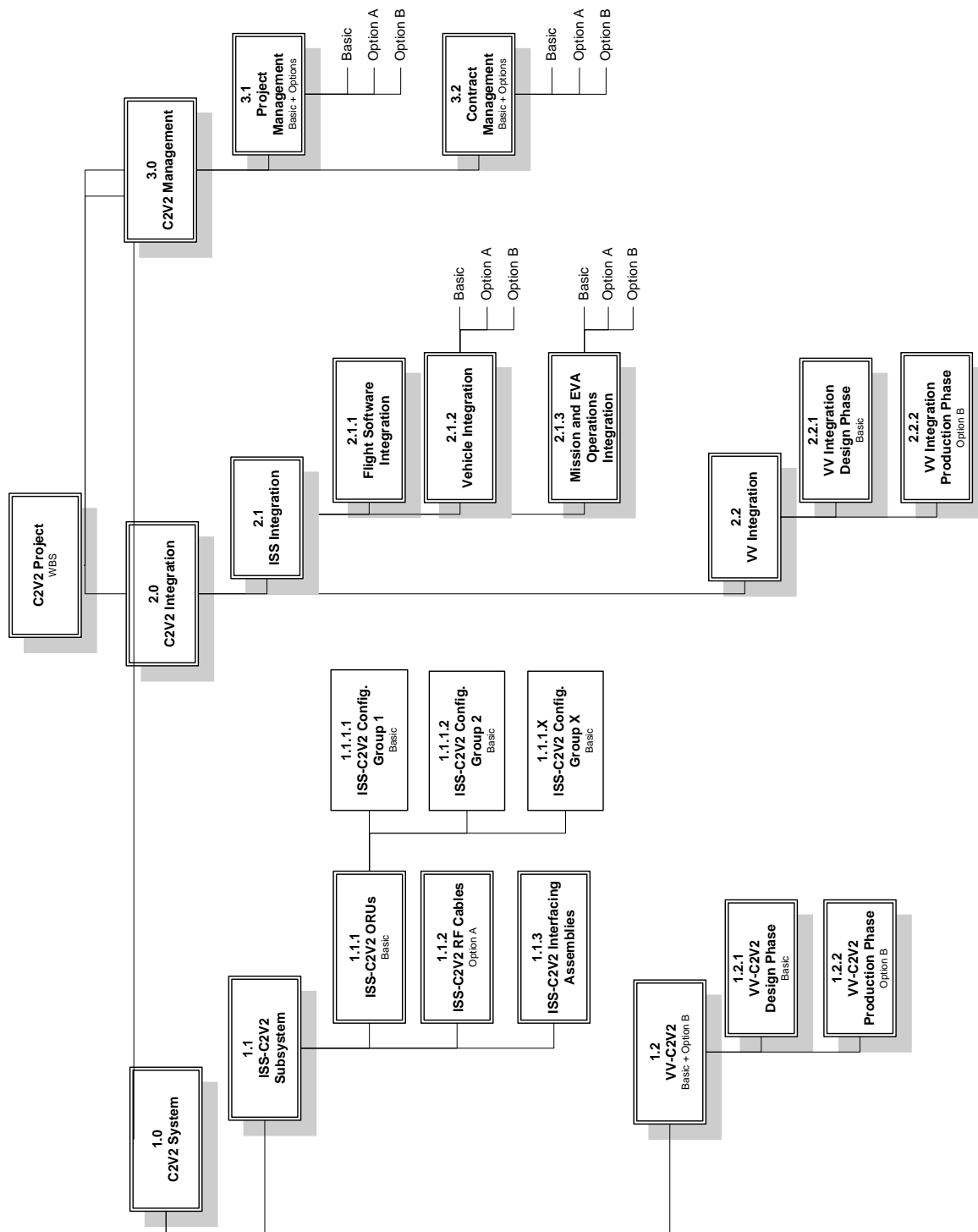


Figure SOW-2: NASA C2V2 Project WBS



## J.2

# C2V2 Project WBS Outline

## 1.0 C2V2 System

### 1.1 ISS-C2V2 Subsystem

- 1.1.1 ISS-C2V2 Orbital Replaceable Unit (ORU) Configuration Groups
  - 1.1.1.1 ISS-C2V2 ORU1 Configuration Group
  - 1.1.1.2 ISS-C2V2 ORU2 Configuration Group
  - 1.1.1.X ISS-C2V2 ORUX Configuration Group (repeat as required replacing “X” with the next consecutive number)

- 1.1.2 ISS C2V2 RF Cables

- 1.1.3 ISS-C2V2 Interfacing Assemblies

### 1.2 VV-C2V2

- 1.2.1 VV-C2V2 Design Phase

- 1.2.2 VV-C2V2 Production Phase

## 2.0 C2V2 Integration

### 2.1 ISS Integration

- 2.1.1 Flight Software Integration

- 2.1.2 Vehicle Integration

- 2.1.3 Mission and EVA Operations Integration

### 2.2 VV Integration

- 2.2.1 VV Integration Design Phase

- 2.2.2 VV Integration Production Phase

## 3.0 C2V2 Management

### 3.1 Project Management

### 3.2 Contract Management

## J.3

# C2V2 Project WBS Dictionary

## **1.0 C2V2 System – ISS Avionics and Software Office Lead**

### **1.1 ISS-C2V2 Subsystem – ISS Avionics and Software Office Lead**

#### **1.1.1 ISS-C2V2 ORUs**

##### **1.1.1.1 ISS-C2V2 ORU1 Configuration Group**

Products: ISS-C2V2 ORU1 Configuration Group engineering, flight equivalent, qualification, and flight unit hardware and software (as applicable) with associated GSE and documentation.

Provider: **C2V2 Contractor** under the Basic Contract

##### **1.1.1.2 ISS-C2V2 ORU2 Configuration Group**

Products: ISS-C2V2 ORU2 Configuration Group engineering, flight equivalent, qualification, and flight unit hardware and software (as applicable) with associated GSE and documentation.

Provider: **C2V2 Contractor** under the Basic Contract

##### **1.1.1.3 ISS-C2V2 ORUX Configuration Group (repeat as required replacing “X” with the next consecutive number)**

Products: ISS-C2V2 ORUX Configuration Group engineering, flight equivalent, qualification, and flight unit hardware and software (as applicable) with associated GSE and documentation.

Provider: **C2V2 Contractor** under the Basic Contract

#### **1.1.2 ISS C2V2 RF Cables**

Products: ISS-C2V2 RF Cables flight and fit check hardware with associated documentation.

Provider: **C2V2 Contractor** under Option A, RF-Cable Option; **NASA ISS Program** under Space Station Change Notice (SSCN) #12639 if option not exercised

#### **1.1.3 ISS-C2V2 Interfacing Assemblies**

Products: ISS-C2V2 Interfacing Assemblies flight and fit check hardware associated documentation.

Provider: **NASA ISS Program** under SSCN#12639

### **1.2 VV-C2V2- ISS Avionics and Software Office lead in collaboration with the ISS Transportation Office and the Commercial Crew Program**

#### **1.2.1 VV-C2V2 Design Phase**

Products: VV-C2V2 engineering unit and FEU hardware and software (as applicable) with associated GSE and documentation. Design documentation through critical design phase completion.

Provider: **C2V2 Contractor** under Basic Contract

#### **1.2.2 VV-C2V2 Production Phase**

Products: VV-C2V2 flight unit hardware and software (as applicable) with associated GSE and documentation.

Provider: **C2V2 Contractor** under Option B, VV-C2V2 Flight Production Option; **VV** under COTS program if option not exercised

## **2.0 C2V2 Integration – ISS Avionics and Software Office lead**

### **2.1 ISS Integration– ISS Avionics and Software Office lead**

#### **2.1.1 ISS Flight Software Integration – ISS Avionics and Software Office lead in collaboration with the Mission Operations Directorate and the ISS Safety & Mission Assurance/Program Risk Office**

Products: ISS flight software releases for computer software configuration items communicating with and controlling the C2V2, software simulation updates to include C2V2 simulation, software interface control documents for C2V2, hardware software integration tests, remote terminal validation tests, Ethernet compatibility tests, Space Station Development Integration Laboratory (SDIL) update to include incorporation and maintenance of C2V2 FEUs and GSE.

Providers: **NASA-JSC** under SSCN#12639 for all products listed; **C2V2 Contractor** under Basic contract for ISS integration products defined in DRD-C2V2-14, Integration Products.

#### **2.1.2 ISS Vehicle Integration– ISS Avionics and Software Office Lead in collaboration with the ISS Vehicle, Safety & Mission Assurance/Program Risk, and Program Integration Offices**

Products: ISS vehicle system-level integrated analyses updated to include C2V2 impacts on system performance, updated vehicle configuration drawings, C2V2-related vehicle modification kits with installation procedures, IVA/EVA human factors analyses associated with installation of C2V2, vehicle interface control document for C2V2, ISS power lab tests.

Providers: **NASA-JSC** under SSCN#12639 for all products listed; **C2V2 Contractor** under Basic contract for ISS integration products defined in DRD-C2V2-14, Integration Products.

#### **2.1.3 Mission and EVA Operations Integration– ISS Avionics and Software Office Lead in collaboration with the ISS Mission Integration and Operations Office, the Mission Operations Directorate, and Extravehicular Activity Office**

Products: Crew procedures associated with C2V2 installation, operations, and troubleshooting, MCC flight director procedures and displays for C2V2 operations and troubleshooting, command and telemetry interface definitions, Station Simulation Training Facility update to include C2V2 simulation.

Providers: **NASA-JSC** under SSCN#12639 for all products listed; **C2V2 Contractor** under Basic contract for ISS integration products defined in DRD-C2V2-14, Integration Products.

### **2.2 VV Integration – ISS Avionics and Software Office lead in collaboration with the ISS Transportation Office and the Commercial Crew Program**

#### **2.2.1 VV Integration Design Phase**

Products: C2V2 VV Interface Definition Document, C2V2 RF ICD, early integration tests with VVs

Providers: **C2V2 Contractor** under the Basic contract for ISS Integration products defined in DRD-C2V2-14, Integration Products.

### **2.2.2 VV Integration Production Phase**

Products: Formal C2V2 integrated tests with VVs.

Providers: **NASA-JSC** under SSCN#12639 for all products listed; **C2V2 Contractor** under Option B, VV-C2V2 Flight Production Option, for ISS integration products defined in DRD-C2V2-14, Integration Products.

## **3.0 C2V2 Management - ISS Avionics and Software Office lead**

### **3.1 Project Management - ISS Avionics and Software Office lead**

Products: Integrated Project Schedule with Integrated schedule inputs from all providers, Project Risk Database with risk inputs from all providers, requirements documents (PIDS, RF ICD, etc.), specifications from all providers, Management Plan, Quality Plan, System Engineering Management Plan, Monthly Project Reports, reviews, earned value reporting.

Providers: **NASA-JSC** under SSCN#12639 for NASA-JSC products; **C2V2 Contractor** under the Basic contract for C2V2 products defined in the DRDs and SOW

### **3.2 Contract Management - ISS Avionics and Software Office lead collaboration with the ISS Program Planning and Control Office**

Products: Cost and labor reports, procurement processing, contract documentation, small business planning and reporting.

Providers: **NASA-JSC** under SSCN#12639 for NASA-JSC products; **C2V2 Contractor** under the Basic contract for C2V2 products defined in the DRDs and SOW.

## J.4

# Contract Milestone Reviews and Delivery Schedule

### Contract Milestone Reviews and Delivery Schedule

Contract Phase	ID	Milestone	Date from Contract Award (Elapsed Calendar Time)
BASIC	1	Contract Kick Off Meeting	2 weeks
	2	Contract Specification Requirements Review	6 weeks
	3	Preliminary Design Review	3 months
	4	Prototype Demonstration at Contractor Facility	12 months
	5	Critical Design Review	15 months
	6	External ISS-C2V2 Acceptance Review and FCA/PCA	26 months
	7	Internal ISS-C2V2 Acceptance Review and FCA/PCA	30 months
	8	Sustaining Engineering Transition Complete	41 months
Option A	Multiple	ISS C2V2 RF Cables Milestones occur in Conjunction with the Basic Contract Milestones 1, 2, 3, 4, 5, 6, and 8. This work is part of Option A.	See 1, 2, 3, 4, 5, 6, and 8
Option B	Multiple	VV-C2V2 Milestones occur in conjunction with Basic Contract Milestones 1, 2, 3, 4, and 5. This work is part of the Basic Contract.	See 1, 2, 3, 4, and 5
	Multiple	VV-C2V2 FCA/PCA and Sustaining Engineering Transition Complete occur in conjunction with Basic Contract Milestones 7 and 8. This work is part of Option B.	See 7 and 8



## J.5

# Contract Deliverables

**Contract Deliverables List for Basic**

<b>ID #</b>	<b>Deliverable Item Nomenclature</b>	<b>Qty</b>	<b>Unit</b>	<b>Fidelity</b>	<b>Date from Contract Award (Elapsed Calendar Time)</b>
1	ISS-C2V2, Engineering Units (EUs)	1	Each Type (Note 6)	EU, Class III	16 months
2	ISS-C2V2, EU Ground Support Equipment (GSE)	1	Each Type	GSE	16 months
3	ISS C2V2 Software Engineering Release (ER) 1 delivered with Item 1 (Note 3)	1	Set (Note 5)	ER	16 months
4	VV-C2V2, EU	2	Each Type	EU, Class III	16 months
5	ISS-C2V2 Software ER2 (Note 3)	1	Set (Note 5)	ER	19 months
6	ISS-C2V2, Training Units	1	Each Type	Training Unit, Class III	19 months
7	ISS-C2V2, Flight Equivalent Unit (FEU) 1	1	Set	FEU, Class II	22 months
8	ISS-C2V2 Software ER3 delivered with Item 7 (Note 3)	1	Set (Note 5)	ER	22 months
9	ISS-C2V2, FEU1 GSE	1	Each Type	GSE	22 months
10	VV-C2V2, VV1 FEUs	1	Set (Note 4)	FEU, Class II	22 months
11	VV-C2V2, VV2 FEUs	1	Set (Note 4)	FEU, Class II	23 months
12	VV-C2V2 Portable Test GSE	2	Each	GSE	22 months
13	ISS-C2V2, FEU2	1	Each Type	FEU, Class II	23 months
14	ISS-C2V2, FEU2 GSE	1	Each Type	GSE	23 months
15	ISS-C2V2, FEU3	1	Each Type	FEU, Class II	24 months
16	ISS-C2V2 Software ER4 (Note 3)	1	Set (Note 5)	ER	25 months
17	External ISS-C2V2, Flight Units (FUs)	1	Set (Note 1)	Flight, Class I	26 months
18	Internal ISS-C2V2, FUs	1	Set (Note 1)	Flight, Class I	30 months
19	ISS-C2V2, Flight Software delivered with Items 17 or 18 (Note 4)	1	Set (Note 5)	Flight release	Delivered with FU
20	ISS-C2V2, FU Spares	Note 2	Each Type	Flight, Class I	36 months
21	ISS-C2V2, Qualification Unit (QU)	1	Each Type	QU, Class I	36 months

Note 1: A set is the full complement of vehicle hardware and installed software (as applicable) required to meet the C2V2 Prime Item Development Specification (PIDS) requirements.

Note 2: Spare quantities and types (e.g. ORU, subassemblies, critical spare components) sufficient to meet the operational lifetime requirements per the C2V2 PIDS based on vendor product design life, mean time between failure, and limited life items.

Note 3: Includes source code and executable.

Note 4: A set is the full complement of VV hardware and installed software required to meet the requirements of the C2V2 PIDS plus one spare of each flight configuration item.

Note 5: A set is the complete software residing in all flight configuration items.

Note 6: A designation of "Each Type" in all instances means the specified quantity shall be provided of each configuration item.

#### Contract Deliverables List for Option A

ID #	Deliverable Item Nomenclature	Qty	Unit	H/W Fidelity	Delivery Date from Contract Award (Elapsed Calendar Time)
A1	ISS-C2V2 RF Cables, FU	1	Set (Note 1)	Flight	19 months
A2	ISS-C2V2 RF Cables, Training Unit	1	Set (Note 1)	Training unit	26 months
Note 1: A set is the full complement of on-orbit hardware required to meet the requirements of the C2V2 PIDS.					

#### Contract Deliverables List for Option B

ID #	Deliverable Item Nomenclature	Qty	Unit	H/W Fidelity	Delivery Date from Contract Award (Elapsed Calendar Time)
B1	VV-C2V2, QUs	2	Each Type	Flight, Class I	24 months
B2	VV-C2V2, FUs	4	Set (Note 1)	Flight, Class I	30 months
Note 1: A set is the full complement of on-orbit hardware and installed software required to meet the requirements of the C2V2 PIDS plus one spare of each type of deliverable.					

#### Equipment Classifications:

- Class I Equipment acceptable for space flight units (controlled flight equipment) that is controlled under a quality program.
- Class II Equipment acceptable for use in ground test or training in a hazardous environment (controlled non-flight equipment) that is controlled under a quality program.
- Class III Equipment acceptable for non-hazardous training display purposes (controlled non-flight equipment). This classification of equipment is NOT acceptable for direct flight equipment interface and must be upgraded through a Materials Review Board (MRB) for direct flight equipment interface.
- GSE Ground Support Equipment (GSE) is non-flight equipment design and certified with a physical and/or functional interface with flight hardware that is required for the handling, servicing, inspection, testing, maintenance, alignment, adjustment, checkout, repair and/or overhaul of Class I or Class II products. GSE may be

stored in a bonded storage or a controlled storage area.

## J.6

# Installation Provided Government Facilities

The NASA-JSC facilities identified below are available as noted for Contractor's use in executing the requirements of this contract. The planned dates for utilization of these facilities shall be identified within 4 calendar weeks of the post award conference. Changes to the facility need dates shall be reported monthly. The Contractor shall coordinate directly with the facility on usage and test execution. NASA-JSC will coordinate with the facility to ensure availability on the agreed upon date.

The Contractor shall use the following facility to verify specific requirements of the C2V2 PIDS unless an acceptable alternative is identified by the Contractor and agreed upon by the NASA COTR:

- Software Development and Integration Laboratory (SDIL) at NASA-JSC for ISS hardware software integrated tests, ISS power interface tests, Ethernet protocol interface tests, and MIL-STD-1553 bus remote terminal validation tests. The SDIL is available during all project life cycles for engineering evaluation and formal qualification testing.

The following facilities may be utilized:

- Electromagnetic interference and compatibility test chambers at NASA-JSC
- Electromagnetic systems test laboratory at NASA-JSC
- Radiation test facilities via NASA-JSC coordination
- Vibration test facilities at NASA-JSC
- Parts test facilities at NASA-JSC
- Thermal vacuum and thermal cycle test facilities at NASA-JSC
- Toxicity, flammability, out-gassing, off-gassing test facilities at either NASA-JSC or NASA-JSC-White Sands Test Facility if sufficient materials data is not available to verify the applicable requirements.

# J.7

## Subcontracting Plan

(To be provided with contractor proposal in accordance with Data Requirement  
Deliverable (DRD) C2V2-02)

## J.8

# Applicable and Reference Documents List



<b>Document Number</b>	<b>Latest Revision</b>	<b>Document Title</b>
ANSI /EIA - 748 Standard	Jan 2005	Industry Guidelines for Earned Value Management Systems
ANSI-ISO/ASQ Q9001-2008	Nov 2008	Quality Management Systems – Requirements
AS9100	Rev C	Quality Management Systems – Requirements for Aviation, Space and Defense Organizations
ASME Y14.24	1999 (Reaffirmed 2004)	Types and Applications of Engineering Drawings
ASME Y14.35M	1997	Revisions of Engineering Drawings and Associated Documents
ASME Y14.41	2003	Digital Product Definition Data Practices
ASME Y14.100	2004	Engineering Drawing Practices
IEEE/ASTM SI 10	2002	American National Standard for Use of the International System of Units (SI): The Modern Metric System
JSC 65991	Draft	Concept of Operations (ConOps) for the International Space Station Common Communications for Visiting Vehicles (C2V2) System
JWI 4210.2	Aug 2009	JSC Instructions for Control of Program Stock Page Change Notice 1, July, 2011
MIL-STD-1553B	Sept 1978 Change Notice 4, Jan 1996	Aircraft Internal Time-Division Command/Response Multiplex Data Bus
NASA-HDBK-6003	Rev C, June 2008	Application of Data Matrix Identification Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques
NASA-STD-6002	Rev D, June 2008	Applying Data Matrix Identification Symbols on Aerospace Parts"
NPG 8715.3	Jan 2000	NASA Safety Manual
NPR 2810.1	Rev A, May 2006	Security of Information Technology
NPR 4100.1	Rev D, July 1999	NASA Materials Inventory Management Manual (Revalidated 2/9/06)
NPR 4200.1	Rev G, March 2010	NASA Equipment Management Procedural Requirements
NPR 4300.1	Rev A, July 1999	NASA Personal Property Disposal Procedural Requirements (Revalidated 2/17/06 with change 1)
NPR 6000.1	Rev H, Nov 2010	Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components
NPR 7120.5	Rev D, March 2007	NASA Space Flight Program and Project Management Requirements
NPR 7123.	Rev A, March 2007	NASA Systems Engineering Processes and Requirements with change 1 (11/04/09)
NPR 7150.2	Rev A, Nov 2009	NASA Software Engineering Requirements
NPR 8000.4	Rev A, Dec 2008	Agency Risk Management Procedural Requirements
OMB Circular A-130	N/A	Management of Federal Information Resources
SSP 30223	Rev L, June 2009	International Space Station Problem Reporting and Corrective Action (PRACA)
SSP 30234	Rev F, July 2002	Failure Modes and Effects Analysis and Critical Items List Requirements for Space Station

SSP 30309	Rev F, Nov 2005	Safety Analysis and Risk Assessment Requirements
SSP 30459	Rev G, Nov 1995	ISS Interface Control Plan
SSP 30599	Rev E, June 2009	Safety Review Process
SSP 30695	Rev C, Aug 2010	ADP Requirements Specification
SSP 41000	Rev BU, March 2011	System Specification for the ISS
SSP 41162	Rev BA, Dec 2008	Segment Specification for the United States On-Orbit
SSP 41170	Rev C, Nov 2008	ISS Program Configuration Management Requirements
SSP 41171	Rev B, Sept 1998	Preparation of Program-Unique Specifications
SSP 41173	Rev D, Aug 2006	Space Station Quality Assurance Requirements
SSP 41174	Rev A, March 2003	ISS Interface Control Working Group Operating Procedures
SSP 50004	Rev A, Feb 2007	Ground Support Equipment Design Requirements International Space Station
SSP 50010	Rev B, Sept 2009	Standards for ISS Program Documentation
SSP 50021	Dec 1995	Safety Requirements Document
SSP 50038	Rev B, Nov 1995	Computer Based Control System Safety Requirements Document
SSP 50175	Rev C, Sept 2009	ISS Risk Management Plan
SSP 50276	Rev A, Nov 2000	Depot/Manufacturing Facility Certification Plan
SSP 50287	Rev A, April 2000	Hardware/Software Acceptance Process
SSP 50482	Rev C, June 2010	ISS Software Management Plan
SSP 50808	Rev C Draft, Feb 2011	ISS to Commercial Orbital Transportation Services (COTS) Interface Requirements Document (IRD)
SSP 50835	Rev B, Nov 2010	ISS Pressurized Volume Hardware Common Interface Requirements Document (CIRD)
SSP 50930	Draft	ISS C2V2 Prime Item Development Specification (PIDS)

## J.9

# Organizational Conflict of Interest (OCI) Plan

(To be provided with contractor proposal in accordance with Data Requirement  
Deliverable (DRD) C2V2-01)

J.10

## C2V2 Incentive Fee Plan

# International Space Station (ISS) Common Communications for Visiting Vehicles (C2V2) Incentive-Fee Plan

## I. Introduction

The C2V2 Incentive Fee Plan contains the following three (3) incentive elements and their respective percentage of total target fee: Technical Performance, Delivery, and Cost. Total target fee shall be proposed by Prospective Offerors and broken down into the percentages for the three (3) incentive categories in Section B of the Request for Proposal (RFP).

The maximum fee earned for this contract is capped at 15% if all maximum incentives are achieved.

All incentive fees will be administered in accordance with Clause FAR 52.216-10, *Incentive Fee*, in Section I of the RFP. This clause applies to all three (3) incentive categories: Technical Performance, Delivery, and Cost Incentives.

Options A and B only correspond to the Cost Incentive only and do not correspond to the Technical Performance and Delivery Incentives.

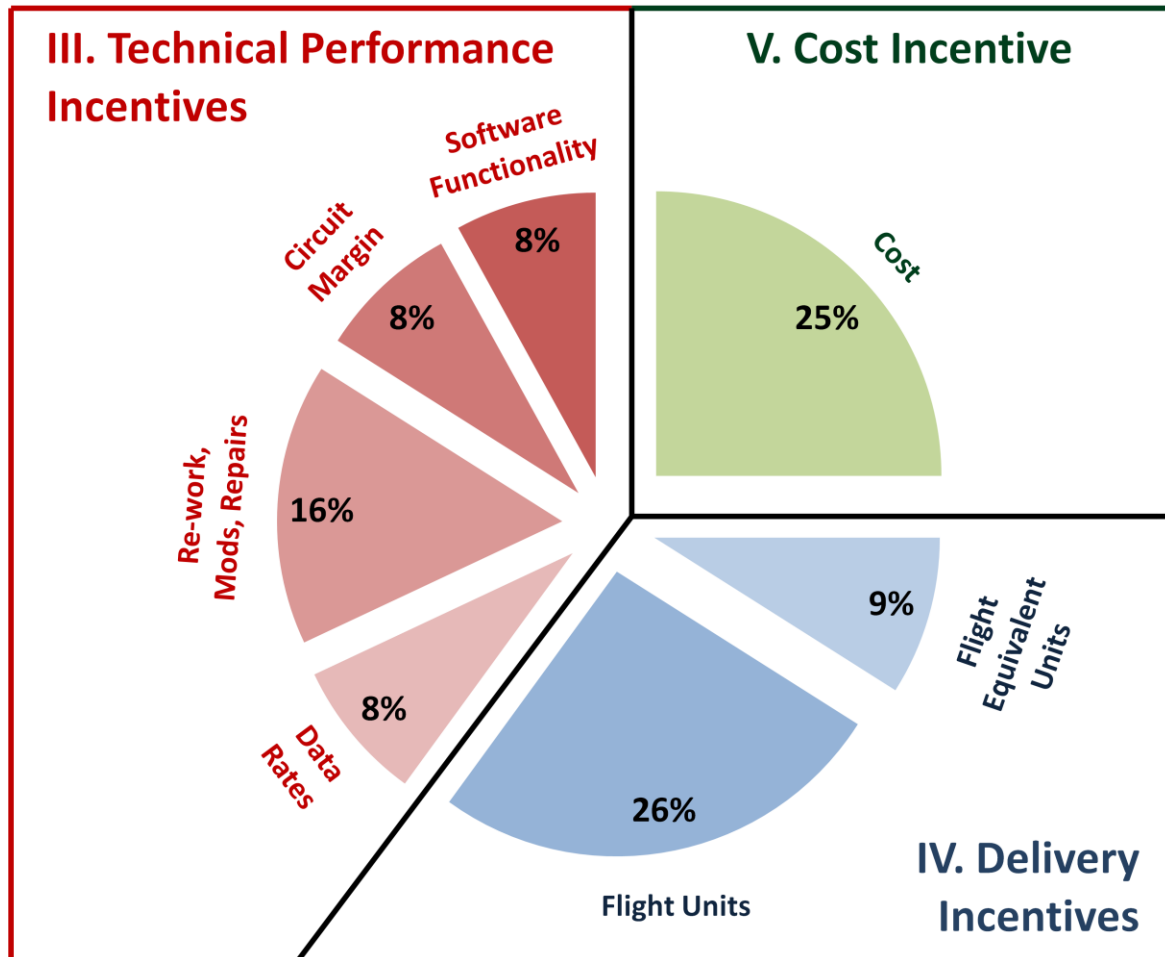
Instructions on how to propose Fee and sample calculations can be found in Section L of the RFP.

III.	Technical Performance	40% of Total Contract Target Fee
IV.	Delivery	35% of Total Contract Target Fee
V.	Cost	25% of Total Contract Target Fee

## II. Calculation

The Contracting Officer's decision as to the amount of incentive fee earned is a unilateral determination based on the established metrics and is subject to FAR 52.233-1 Disputes (JUL 2002) – ALT I (DEC 1991).

The following is an illustration that demonstrates the percentages within each of the 3 Incentive categories:



### III. Technical Performance Incentives

Technical Performance Incentives	40% of Total Contract Target Fee Earned for Technical Performance
III(a) Reworks, Modifications, and Repairs	16% of 40%
III(b) Data Rates	8% of 40%
III(c) Circuit Margin	8% of 40%
III(d) Software Functionality	8% of 40%

*Options A and B, Clauses F.4 and F.5 of the RFP, do not correspond to Technical Performance Incentives. Only the Basic applies.*

#### III(a) Reworks, Modifications and Repairs

The following incentivizes minimal reworks, modifications, and repairs to the first flight set of hardware, item 17, *External ISS-C2V2 Flight Units (FUs)* and item 18, *Internal ISS-C2V2 FUs* in Section J-5 of the RFP, *Contract Deliverables*.

Rework, Modifications, and Repair Measurement	Percentage of Total Contract Target Fee Earned for Technical Performance
Below the guidelines in at least 3 categories (any of the categories in either Rework, Modification, or Repair)	+3.2% (19.2%)
None of the guidelines exceeded in any category	16%
Guidelines exceeded in any category with NASA-JSC approval via a Material Review Board (MRB)*	-3.2% (12.8%)
Guidelines exceeded in any category without NASA-JSC approval via a Material Review Board (MRB)*	-16% (0%)

\*The MRB process is described in Space Station Program (SSP) Document 30233, *Space Station Requirements for Materials and Processes*

Measurement for Technical Performance Incentive III (a) shall be in accordance with the following guidelines:

### **GUIDELINES FOR REWORK, MODIFICATION, AND REPAIR OF PRINTED WIRING BOARDS (PWB) AND PRINTED WIRING ASSEMBLIES (PWA)**

The goal of all rework, modification, or repair activity is to correct, change, or restore functionality in a manner that brings the affected hardware into conformance to the engineering documentation and performance specification.

#### **1. REWORK (CORRECT)**

Rework corrects minor assembly and workmanship non-conformances to bring the affected hardware into conformance to the engineering documentation.

a. The following solder workmanship non-conformances as defined by the contract imposed workmanship standards are correctable by rework:

1. Excessive, insufficient, missing solder
2. Bridging
3. Cold, disturbed solder, solder demarcation, freeze, points, peaks, and icicles
4. Exposed base metal.
5. Poor wetting, dewetting (does not include non-wetting)
6. Pits, pinholes, voids, flux entrapment

b. Rework shall be limited to **three percent (3%)** of the total number of solder joints on either side of the printed wiring assembly.

***(Rework Category 1: Guideline = 3%, Below Guideline < 3%, Exceeding the Guideline > 3%)***

c. Rework to any one joint shall be limited to a maximum of **three (3)** complete desolder and resolder operations.

***(Rework Category 2: Guideline = 3, Below Guideline < 3, Exceeding the Guideline > 3)***

#### **2. MODIFICATION (CHANGE)**

Modification changes the functional capability of the affected hardware.

a. The modification of a printed wiring board (PWB) or printed wiring assembly (PWA) shall be limited to the revision or rerouting of circuit interconnections by the interrupting of conductors (i.e., printed traces, component leads, or discrete wires), the addition of conductors, the addition of components, or deletion of components.

b. The addition or removal of one (1) component shall be counted as one (1) modification and shall include any required revision(s) of the component's associated circuit connections.

c. The revision of all circuit connections to an individual component shall count as one (1) modification. Modification of component internal circuitry is prohibited.

Modifications shall not exceed **three (3)** to any one area of less than 25.8 cm<sup>2</sup> (4 in<sup>2</sup>) and the maximum number of modifications per board shall be in accordance with Table 1.

***(Modification Category 1: Guideline = 3, Below Guideline < 3, Exceeding the Guideline > 3)***



### 3. **REPAIR (RESTORE)**

Repair restores the functional capability of the affected hardware. Depending on the severity of the damage, the repair may or may not return the affected hardware to full conformance to the engineering documentation.

b. Number of repairs. The maximum number of all types of repairs permitted per board shall be in accordance with Table 1.

1) Epoxy. Repairs involving the use of epoxy adhesives shall not exceed **four (4)** to any one area of less than 25.8 cm<sup>2</sup> (4 in<sup>2</sup>), and the maximum number of epoxy repairs permitted per board shall be in accordance with Table 1.

***(Repair Category 1: Guideline = 4, Below Guideline < 4, Exceeding the Guideline > 4)***

2) Solder. The number of solder repairs to lands, conductors, or plated-through-holes shall not exceed **three (3)** to any one area of less than 25.8 cm<sup>2</sup> (4 in<sup>2</sup>), and the maximum number of solder repairs permitted per board shall be in accordance with Table 1.

***(Repair Category 2: Guideline = 3, Below Guideline < 3, Exceeding the Guideline > 3)***

3) Component Repairs. The maximum number of component repairs requiring soldering shall not exceed **six (6)** per board.

Exception: When a printed wiring assembly (PWA) supports more than 120 passive chip components on either side, the total number of repairs to passive chip components shall not exceed 5% of the quantity installed on that side of the PWA.

***(Repair Category 3: Guideline = 6, Below Guideline < 6, Exceeding the Guideline > 6)***

4) Solder Thermal Cycles. The maximum number of solder repairs to any one joint (land, conductor, plated-through-hole, component lead, etc.) shall not exceed **three (3)** complete thermal cycles (desolder and resolder).

***(Repair Category 4: Guideline = 3, Below Guideline < 3, Exceeding the Guideline > 3)***

TABLE 1	Maximum Number of Modifications / Repairs per Board			
Board Area (A), cm <sup>2</sup> (in <sup>2</sup> ) ④	Modification ①	Repair ②③		
		Epoxy	Solder	Total
< 129 (< 20)	6	4	3	4
129 ≤ A < 322.6 (20 ≤ A < 50)	12	12	6	12
322.6 ≤ A < 645.2 (50 ≤ A < 100)	18	18	9	18
≥ 645.2 (≥ 100)	24	24	12	24
Component Repairs		6		
Passive Chip Components		≤ 5% of quantity installed (per side of PWA)		
Notes:				
1. Modifications shall not exceed three (3) to any one area of ≤ 25.8 cm <sup>2</sup> (≤ 4 in <sup>2</sup> ).				
2. Epoxy repairs shall not exceed four (4) to any one area of ≤ 25.8 cm <sup>2</sup> (≤ 4 in <sup>2</sup> ).				
3. Solder repairs shall not exceed three (3) to any one area of ≤ 25.8 cm <sup>2</sup> (≤ 4 in <sup>2</sup> ).				
4. Board Area (A) is based on individual layer surface area of the PWA. Values are not cumulative.				

**Time of Measurement:** Measured at Government hardware acceptance with a signed DD-250, *Material Inspection and Receiving Report*, per NFS 1852.246-72, *Material Inspection and Receiving Report*.

**Payment:** The fee voucher for this incentive can be submitted to the address in clause G.2, *Submission of Vouchers for Payment*, upon signature of the DD-250 and will be payable thirty (30) days from receipt and approval by the Contracting Officer

### III(b) Data Rates

The following incentivizes C2V2 return link information data rates at the specified range. Note: Information data rate is defined as the number of bits per second needed to send Virtual Channel Data Units (VDCUs) across the Radio Frequency link, without taking into account any type of Channel Access Data Unit (CADU) overhead such as frame formats or error correction schemes.

Data Rates Measurement (Mega Bits Per Second) at Range	Percentage of Total Contract Target Fee Earned for Technical Performance
≥ 4 Mbps at 600 meters	(1.6%) 9.6%
≥ 4 Mbps at 200 meters	(.8%) 8.8%
> 0.6 Mbps to .< than 4 Mbps at 600 meters	8%

If an Offeror fails to meet a data rate of 0.6 Mbps at 600 meters, the product will not be accepted via a DD-250.

**Time of Measurement:** Measured at Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) per DRD-C2V2-18, *Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) and Certification Data Package (CDP)*.

**Payment:** The fee voucher for this incentive can be submitted to the address in clause G.2, *Submission of Vouchers for Payment*, upon final approval of the FCA/PCA and will be payable thirty (30) days from receipt and approval by the Contracting Officer.

### III(c) Circuit Margin

The following incentivizes the nominal circuit margin on the forward and return links at 10 km for an information data rate of 100 kbps. Note: Information data rate is defined as the data rate prior to error correction encoding.:

Circuit Margin Measurement (kilo bits per second)	Percentage of Total Contract Target Fee Earned for Technical Performance
≥ 9dB (Decibels)	(+1.6%) 9.6%
≥ 6 dB (Decibels)	(+.8) 8.8%
≥ 3 dB (Decibels)	8%

If an Offeror fails to meet a circuit margin of 3 dB, the product will not be accepted via the DD-250 acceptance procedure.

**Time of Measurement:** Measured at Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) per DRD-C2V2-18, *Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) and Certification Data Package (CDP)*.

**Payment:** The fee voucher for this incentive can be submitted to the address in clause G.2, *Submission of Vouchers for Payment*, upon final approval of the FCA/PCA and will be payable thirty (30) days from receipt and approval by the Contracting Officer.

### III (d) Software Functionality

The following incentivizes delivery of software functionality as specified by the Software Build Plan in the Integrated Master Schedule in DRD-C2V2-04, *Contract Schedules*, and the delivery dates specified in Section J-5 of the RFP, *Contract Deliverables*:

Software Functionality Measurement	Percentage of Total Contract Target Fee Earned for Technical Performance
If functionality designated for a later milestone delivery is delivered in an earlier milestone and all required functionality is delivered per the build plan and milestone schedule	(+1.6%) 9.6%
Target incentive fee if all required functionality is delivered per the build plan and milestone schedule	8%
If functionality designated for an earlier delivery is delivered in a later milestone	(-1.6%) 6.4%

**Time of Measurement:** Measured at software delivery of item 3 - *ISS-C2V2 Software Engineering Release (ER) 1*, item 5- *ISS-C2V2 Software ER2*, item 8 - *ISS-C2V2 Software ER3*, and item 16 - *ISS-C2V2 Software ER4*, in Section J-5 of the RFP, *Contract Deliverables*. A final calculation will be made after delivery of all four (4) items.

**Payment:** The fee voucher for this incentive can be submitted to the address in clause G.2, *Submission of Vouchers for Payment*, upon final delivery of the items stated above and will be payable thirty (30) days from receipt and approval by the Contracting Officer.

**III (e) Target Fee for Technical Performance Incentives:**

The Target Fee for Technical Performance Incentive III(a) is :	(% Offeror Fill-in) and (\$ Offeror Fill-in)
The Target Fee for Technical Performance Incentive III(b) is:	(% Offeror Fill-in) and (\$ Offeror Fill-in)
The Target Fee for Technical Performance Incentive III(c) is:	(% Offeror Fill-in) and (\$ Offeror Fill-in)
The Target Fee for Technical Performance Incentive III(d) is:	(% Offeror Fill-in) and (\$ Offeror Fill-in)

## IV. Delivery Incentives

Delivery Incentives	35% of Total Contract Target Fee for Delivery
IV(a) Internal or External Flight Units Sets (FUs)	26% of 35%
IV(b) Flight Equivalent Unit Sets (FEUs)	9% of 35%

*Options A and B, Clauses F.4 and F.5 of the RFP, do not correspond to the Delivery Incentives. Only the Basic applies.*

### IV(a) Flight Units (FUs) Sets

Fee is allocated for item 17, *External ISS-C2V2 Flight Units (FUs)*, item 18, *Internal ISS-C2V2 FUs*, and item 19, *ISS-C2V2 Flight Software Delivered with Items 17 or 18*, in Section J-5 of the RFP, *Contract Deliverables*. Depending on the Offeror's proposed requirements solution, the nominal delivery date is tied to either 17 or 18 or both with item 19 accompanying either solution.

Flight Unit Sets (FUs) Measurement	Percentage of Total Contract Target Fee Earned for Delivery
Delivery 65 business days early	35%
Delivery at target nominal date	26%
Delivery at 120 business days late	(-20.8%) 5.2%
Delivery after 120 business days late	(-26%) 0%

A positive incentive fee, up to 9%, for delivery earlier than the nominal date in Section J-5 of the RFP can be earned at a rate of .14% per business day for every business day earlier than the nominal date, up to a maximum of 65 business days.

A negative incentive fee of .17% per business day for every business day later than the nominal date in Section J-5 of the RFP up to 119 business days for a total negative incentive fee of 20.6%. An Offeror that delivers exactly at 120 business days will be imposed a negative incentive fee of 20.8%. An Offeror that delivers later than 120 business days will be imposed a negative incentive fee of 26%.

Sample calculations can be found in Section L of the RFP:

**Time of Measurement:** An item shall be considered delivered upon Government acceptance, specifically DD-250, *Material Inspection and Receiving Report*, per NASA FAR Supplement 1852.246-72, Acceptance Data Package (ADP) approval per DRD-C2V2-20, *Acceptance Data Package (ADP)*, and Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) approval per DRD-C2V2-18, *Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) and Certification Data Package (CDP)*.

**Payment:** The fee voucher for this incentive can be submitted to the address in clause G.2, *Submission of Vouchers for Payment*, upon final signature of the DD-250 and approval of the ADP and FCA/PCA and will be payable thirty (30) days from receipt and approval by the Contracting Officer.

#### **IV(b) Flight Equivalent Unit (FEUs) Sets**

Fee is allocated for item 7, *ISS-C2V2 Flight Equivalent Units (FEUs) 1*, and item 8, *ISS-C2V2 Software ER3 Delivered with Item 7*, in Section J-5 of the RFP, *Contract Deliverables*.

A positive incentive fee, up to 3.25%, for delivery earlier than the nominal date in Section J-5 of the RFP can be earned at a rate of 0.05% per business day for every business day earlier than the nominal date, up to a maximum of 65 business days.

A negative incentive fee of 0.06% per business day for every business day later than the nominal date in Attachment J-5 up to 119 business days for a total negative incentive fee of 7.14%. An Offeror that delivers exactly at 120 business days will be imposed a negative incentive fee of 7.2%. An Offeror that delivers later than 120 business days will be imposed a negative incentive fee of 9%.

Sample calculations can be found in Section L of the RFP.

<b>Flight Equivalent Units Sets (FEUs) Measurement</b>	<b>Percentage of Total Contract Target Fee Earned for Delivery</b>
Delivery 65 business days early	+3.25% (12.25%)
Delivery at target nominal date	9%
Delivery at 120 business days late	-7.2 (1.8%)
Delivery after 120 business days late	-9% (0%)

**Time of Measurement:** An item shall be considered delivered upon Government acceptance, specifically DD-250, *Material Inspection and Receiving Report*, per NASA FAR Supplement 1852.246-72, *Material Inspection and Receiving Report*, and approval per DRD-C2V2-20, *Acceptance Data Package (ADP)*.

**Payment:** The fee voucher for this incentive can be submitted to the address in clause G.2 upon final signature of the DD-250 and approval of the ADP and will be payable thirty (30) days from receipt and approval by the Contracting Officer.

#### **IV(c) Target Fee for Delivery Incentives**

The Target Fee for Delivery Incentive IV(a) is :	(% Offeror Fill-in) and (\$ Offeror Fill-in)
The Target Fee for Delivery Incentive IV(b) is:	(% Offeror Fill-in) and (\$ Offeror Fill-in)

## V. Cost Incentive

Cost Incentive	25% of Total Contract Target Fee for Cost
V(a) Cost Incentive	25% of 25%

*The Basic and Options A, and B, Clauses F.4 and F.5 in the RFP, all apply to the Cost Incentive.*

The following cost incentive subcategories from Section B, NFS 1852.216-84 Estimated Cost and Incentive Fee, are hereby incorporated into this Incentive Fee Plan:

### **Target Fee for Cost Incentive:**

The Target Fee for the Basic is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Target Fee for Option A is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Target Fee for Option B is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Maximum Fee for the Basic is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Maximum Fee for Option A is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Maximum Fee for Option B is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Minimum Fee for the Basic is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Minimum Fee for Option A is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>
The Minimum Fee for Option B is:	<i>(% Offeror Fill-in) and (\$ Offeror Fill-in)</i>

The cost share ratios shall be proposed with the same ratio for the Basic, Option A, and Option B:

The Cost Share Ratio for Cost Underruns (Government/Contractor) is:	<i>(Offeror Fill-in)</i>
The Cost Share Ratio for Cost Overruns (Government/Contractor) is:	<i>(Offeror Fill-in)</i>

**Time of Measurement:** Measured at the end of the contract Period of Performance.

**Payment:** The final amount of cost incentive earned is subject to the a final determination of the actual costs incurred which may require an incurred cost audit to be performed after completion of the contract's Period of Performance as defined by the clause at F.3 entitled "Contract Completion Date." However, a final provisional fee voucher for the full amount of cost incentive estimated to be earned based upon provisionally approved costs paid by the Government may be submitted to the Contracting Officer for payment following the period of performance as defined by the clause at F.3. In addition, prior to this,final provisional fee voucher, and during contract performance, the contractor may request interim provisional payments of cost incentive in accordance with the instructions for provisional fee payments in the next section.

## **VI. Provisional Fee Payments**

Provisional fee payment for the Technical Performance, Delivery, and Cost Incentives shall be billed on a monthly basis at a prorated rate that shall not exceed 60% of the Offeror's proposed total target fee. This fee shall be reported on the Offeror's monthly NASA Form 533 submission. Provisional fee vouchers will be submitted directly to the NASA Shared Services Center (NSSC) in accordance with clause G.2, NFS 1852.216-87 *Submission of Vouchers for Payment*. Provisional fee vouchers will be payable thirty (30) days after receipt and approval by the Contracting Officer.



## J.11

# Data Requirements List and Data Requirements Descriptions (DRDs)

To the extent that data required to be furnished by other provisions of this contract are also identified and described in a DRL or DRD, compliance with the DRL or DRD shall be accepted as compliance with such other provisions.

Nothing contained in this DRL provision shall relieve the contractor from furnishing data not identified and described in the DRL attachment but called for by, or under the authority of, other provisions or as specified elsewhere in this contract. Except as otherwise provided in this contract, the cost of data to be furnished in response to the DRL attached to this contract or data is to be delivered under the authority of other sections (clauses/statement of work) and are included in the price of this contract.

<b>DRD Numbers</b>	<b>Type</b>	<b>Page Number</b>	<b>DRD Title</b>
<b>C2V2-01</b>	2	93-94	Organizational Conflicts of Interest (OCI) Avoidance Plan
<b>C2V2-02</b>	Plan – 1 Report - 2	95-96	Small Business Subcontracting Plan and Reports
<b>C2V2-03</b>	1	97-99	Management Plan
<b>C2V2-04</b>	3	100-102	Contract Schedules
<b>C2V2-05</b>	1	103-104	Government Property Management Plan
<b>C2V2-06</b>	1	105-106	Configuration Management Plan
<b>C2V2-07</b>	Plan – 1, Report - 2	107-108	Information Technology (IT) Security Management Plan and Reports
<b>C2V2-08</b>	3	109-127	NF533 Cost and Data Reporting
<b>C2V2-09</b>	1	128	Contract Closeout Plan
<b>C2V2-10</b>	3	129-130	Monthly Project Report
<b>C2V2-11</b>	3	131	Project Management Review (PMR) Package
<b>C2V2-12</b>	1	132-133	Contractor Specifications and Interface Documents
<b>C2V2-13</b>	2	134-136	Hardware and Software Life Cycle Reviews
<b>C2V2-14</b>	3	137-138	Integration Products
<b>C2V2-15</b>	3	139-140	Engineering Flight Drawings, Models, and Associated Lists
<b>C2V2-16</b>	2	141-142	Qualification and Acceptance Plans and Procedures
<b>C2V2-17</b>	139	143	Verification Plan
<b>C2V2-18</b>	1	144-145	Functional Configuration Audit and Physical Configuration Audit (FCA/ PCA) and Certification Data Package (CDP)
<b>C2V2-19</b>	3	146-147	Software Version Description Drawing (VDD)
<b>C2V2-20</b>	2	148	Acceptance Data Package (ADP)
<b>C2V2-21</b>	1	149-150	Quality Plan
<b>C2V2-22</b>	1	151	Safety Analysis and Hazard Reports
<b>C2V2-23</b>	1	152	Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)

Subject to the Rights in Data clause, this Data Requirements List (DRL) and Data Requirements Description (DRD) sets forth the data requirements in each DRD and shall govern that data required by the DRL and DRD for this contract. The contractor shall furnish data defined by the DRDs listed on the DRL by category of data. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this DRL and DRD. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) regulation or clause, the regulation will take precedence over the DRD, per FAR 52.215.33. NASA-Owned or Contractor-Held records shall be managed by the Contractor in accordance with Title 36 of the code of Federal Regulations, Chapter XII B, Records Management, and NPD 1440.6, NASA Records Management Program. The records shall be organized in accordance with the instructions in NPR 1441.1, NASA Records Retention Schedules, as applicable. The contractor shall disposition records and non-records in accordance with

NPR 1441.1, NASA Records Retention Schedules, which has been approved by NASA and the National Archives and Records Administration (NARA). All questions on records management issues shall be directed through the Contracting Officer to the ISS Technical Records Liaison Officer.

Documents included as applicable documents in this DRL and DRD are the issue specified in the Statement of Work, and form a part of the DRL and /DRD to the extent specified herein. References to documents other than applicable documents in the data requirements of this DRL and DRD may sometimes be utilized. These do not constitute a contractual obligation on the contractor. They are to be used only as a possible example or to provide related information to assist the contractor in developing a response to that particular data requirement.

## **DESCRIPTION**

This document identifies and defines the requirements and data types for information and data required under this contract.

The DRDs define, by an individual data requirement, the information and data required for each deliverable document. The data types are used to identify the approval and control required for each DR. The DRL is an index of all the DRs by category.

Documentation submitted pursuant to this clause may incorporate references to other current approved documentation, provided the references are adequate and include such identification elements as title, document number, and approval date (where applicable). However, if the pertinent information is of relatively minor size, the contractor shall incorporate the information itself, in lieu of using a reference. The contractor shall assure that any referenced information is readily available to appropriate users of the submitted document.

All DRs shall be delivered using the NASA Electronic Document Management System (EDMS) workflow.

## **DATA TYPES**

For the purpose of this clause, the following information/documentation types are applicable:

- Type 1 That information and documentation which requires NASA approval prior to release. Approved type 1 information and documentation shall be controlled, and deviations from or changes to the concepts, techniques, and/or requirements stated therein shall require NASA approval prior to implementation. All work under this contract covered by approved type 1 documents shall be performed in accordance with those approved documents. The Contracting Officers Technical Representative will have approval authority and will sign the data prior to its release. Contractually binding documents will not be implemented nor revised without contractual authorization.
- Type 2 That information and documentation for which NASA reserves a time-limited right to disapprove, in whole or in part. Type 2 data shall be submitted to JSC for review not less than 30 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not received any comment prior to the released target date, the document may be released for appropriate use. Any NASA comment received shall be appropriately dispositioned before the document is to be used. Type 2 data may be approved by NASA prior to its submittal.
- Type 3 That information and documentation which is provided to NASA for surveillance, information, review, and/or management control. This information does not require formal NASA review and approval. Information in this category would include design solutions, status, and cost/schedule reporting; analyses and test results, handbooks; and other designated lists, reports, etc.

Type 1 submissions shall be marked "TYPE 1 PRELIMINARY pending NASA approval or Type I APPROVED BY NASA, as appropriate." Additional special designations and deviations may be required on specific submissions in accordance with configuration management requirements.

Type 2 submissions shall be marked "TYPE 2 PRELIMINARY - RELEASE TARGET DATE, xx/xx/xx" or "TYPE 2 FINAL - NASA COMMENTS INCLUDED" or "TYPE 2 FINAL DOCUMENT," where NASA comments were not received.

NOTE: Documents submitted under this clause, even though directly (Type 1) or implicitly (Type 2) approved by NASA, shall not take precedence over the specifications as set out in Section C, Statement of Work.

The contractor shall normally deliver a complete revised Type 1 or Type 2 data requirement with NASA comments incorporated within 45 calendar days of receipt of comments.

Type 3 submissions shall be marked "TYPE 3 DOCUMENT - FOR INFORMATION, SURVEILLANCE, REVIEW OR MANAGEMENT CONTROL".

## **ELECTRONIC FORMAT**

Management Information System (MIS) Data Requirements: MIS is a web-based data repository designed to keep ISS Program management and personnel aware of the most current ISS Program technical, financial, workforce, schedules, and operational information, including issues and risks. MIS links ISS Program core business issues and goals with the technical aspects of the Program. To accomplish this, ISS Program managers will utilize (from the Contractor) selected financial planning technical costs, workforce data, Program schedules, Program metrics and other status information. This selected information exists in the various DRDs which are requested by the contract. As required, other data and supporting formats should be developed by the Contractor with concurrence from ISS Program Business Management Office.

DRDs shall be maintained electronically in the Contractor's own format, unless a specified format is defined in the DRD. The government may define specific DRD data format to support the utilization of this data in the Management Information System.

## **EDMS WORKFLOW PROCESS**

The Contractor will be responsible for providing a representative(s) responsible for the uploading the DR to EDMS. This representative will be required to apply for EDMS access, be trained on EDMS and maintain the agreed to folder structure.

As specified in earlier sections, the contractor shall deliver a DR to NASA electronically using the EDMS workflow. Approval of DRs is based on the prescribed data type, which is discussed in Data Type Section. A DR will follow a workflow process once it is delivered into EDMS where it may either be approved or "reworked". If NASA approves a DR, the contractor will get notification via e-mail that the DR has been approved. If the DR is rejected, NASA will provide comments to the contractor through the "rework" process detailing why it has not been approved. The contractor has 30 work days from the date the DR was rejected to disposition NASA comments and resubmit the DR electronically into EDMS. The DR will then be either approved or sent back again to the contractor via the "rework" process. There is not a limit on how many times a DR can go through the "rework" process before it is finally approved.

## **STATEMENT OF WORK DATA DELIVERABLES**

Data required in accordance with a SOW statement which does not have a DR reference will be delivered to NASA electronically using the EDMS workflow, indicating the applicable SOW paragraph. This information does not require NASA's approval prior to its release in EDMS and will be released in EDMS upon delivery.

## **SUBMISSION INFORMATION**

Wherever in the following DRDs under "First Submission Date" or "Frequency of Submission" delivery is specified as at "PDR" or at any other program event, then delivery shall be required at the start or initialization of the event. Similarly when delivery is specified as a discrete amount of time before a program or project event (i.e., PDR minus 60 calendar days) then delivery will be required that discrete amount of time before the start of the program or project event. In addition, whenever delivery is specified as after an event, (i.e., PDR plus 30 calendar days) delivery should be required after the end of the event.

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-01	RFP/Contract No. NNJ11393918R
Organizational Conflicts of Interest (OCI) Avoidance Plan			
1b. Data Type: 2			
4. Use: To document the Contractor's implementation plan for avoiding, neutralizing, and mitigating organizational conflicts of interest.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: FAR Subpart 9.5, Organizational and Consultant Conflicts of Interest			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:** The OCI Avoidance Plan describes the Contractor's comprehensive management approach and implementation methods for avoiding, neutralizing, or mitigating the occurrence of an OCI. After approval, the OCI Avoidance Plan will become part of the contract.

**CONTENT:** The plan shall address all organizational conflicts of interest to prevent the existence of conflicting roles that might bias a contractor's judgment and create an unfair competitive advantage. The plan shall establish specific and timely methods to identify, evaluate, and resolve organizational conflicts of interest. FAR Subpart 9.5 describes the nature of these applicable relationships.

The Contractor OCI Avoidance Plan shall identify the nature of an OCI, assess the likelihood of it occurring, evaluate the impact, and institute mitigation measures to both prevent the occurrence and minimize the impact.

The Contractor OCI Avoidance Plan shall document the general procedures that the Contractor will use to respond to OCI issues that are identified.

The Contractor OCI Avoidance Plan shall include at least the following information:

- i. Purpose – A summary of the Contractor's rationale for instituting and applying the OCI Avoidance plan;
- ii. Update Criteria – A description of the criteria and process for determining when an update to the plan is required;
- iii. OCI Assessment Methodology – A summary of the general methodology used to avoid, neutralize or mitigate OCI issues;
- iv. OCI Risks – A description of potential OCI risks, due to the Contractor's relationships or potential relationships with the Government, other companies, and other contracts. The description shall characterize the risk and measures to avoid, neutralize, or mitigate each OCI threat;
- v. Personnel Clearance Procedures – A description of the procedures the Contractor will use if needed to identify and partition Contractor personnel requiring access to or participation in activities that would otherwise create an OCI issue;
- vi. OCI Response Procedures – A summary of the steps that the Contractor will take when an OCI has been identified or when circumstances have changed such that an OCI issue is probable;
- vii. OCI Training – A description of the training to be provided to Contractor personnel regarding potential OCI on this contract.

**FORMAT:** MS Word

**DISTRIBUTION:**

OPR: BG/Contracting Officer

Other: OD/Contracting Officer's Technical Representative

SUBMISSION:

- i. Initial: Due with proposal (per instructions in section L).
- ii. Final: Contract award + 30 days, via EDMS workflow
- iii. Approval: Contract start + 60 days, via EDMS workflow
- iv. Frequency: Annual, via EDMS workflow

MAINTENANCE: Annual and in accordance with Contractor determined update criteria.

REMARKS: None

1a. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Small Business Subcontracting Plan and Reports		C2V2-02	NNJ11393918R
1b. Data Type: Plan – Type 1 Report – Type 2			
4. Use: To describe the Contractor's planned approach to Small Business Subcontracting and their reporting against this plan.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: a. FAR 19.702, Statutory requirements b. FAR 52.219-8, Utilization of Small Business Concerns c. FAR 52.219-9, Small Business Subcontracting Plan d. NFS 1852.219-75, Small Business Subcontracting Reporting e. NFS 1852.219-76, NASA 8 Percent Goal			7. Interrelationships:

8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

SCOPE:

The Small Business Subcontracting Plan shall be in compliance with FAR 52.219-9. The Small Business Subcontracting Reporting shall be in compliance with NFS 1852.219-75. Upon approval, the Small Business Subcontracting Plan will become a part of the contract.

CONTENT:

i. In addition to the required content in FAR 52.219-9 the Small Business Subcontracting Plan shall include the following:

1. The Subcontracting Plan must include the approach that the Contractor intends to use in meeting the subcontracting goals.
2. Subcontractors whose bid is part of this proposal should be identified. For each subcontractor, the percentage of the proposal and any small or small business subcategory classification should be identified.
3. For areas of potential future subcontracting, the Contractor should identify the area of work, the percentage of contract that this is expected to encompass, potential subcontractors and their small business or small business subcategory classification.
4. Describe the management approach to subcontracting with small disadvantaged, Women-owned, HUBZoned, Veteran owned, and Service disabled veteran owned companies and HBCU/MIs (Historically Black Colleges & Universities/Minority Institutions).
5. As part of the Subcontracting Plan, the contractor will provide a phased approach to meeting their small business goals, including milestones for incrementally increasing percentages until the goals are met.

ii. Small Business Subcontracting Reports:

1. Contractors are required to submit subcontracting data in the Electronic Subcontracting Reporting System (eSRS) which has replaced the paper Standard Form 294 and SF 295 Summary Subcontracting Reports.
2. All contractors are required to register and file both types of subcontracting reports (SF 294 and SF 295 data) using the eSRS system. The website to register is [www.esrs.gov](http://www.esrs.gov).
3. In addition to eSRS submission, the contractor shall provide a summary of small business data compared to established goals per Contract Section H.5.



FORMAT: Electronic MS Word format is acceptable for the plan; reporting shall be in compliance with NFS 1852.219-75, Small Business Subcontracting Reporting.

DISTRIBUTION:

OPR: BG/Contracting Officer

Other: OD/Contracting Officer's Technical Representative

SUBMISSION:

- i. Initial: Due with proposal (per instructions in section L).
- ii. Approval: Prior to contract award via EDMS workflow
- iii. Frequency: Subcontracting Plan to be updated in accordance with FAR 19.702. Report shall be provided semi-annually and at contract completion, via EDMS workflow

MAINTENANCE: Revisions shall be incorporated by change page or complete reissue.

REMARKS: None

1a. DRD Title Management Plan	2. Date of current version	3. DRL Line Item No. C2V2-03	RFP/Contract No. NNJ11393918R
1b. Data Type: 1			
4. Use: To provide a comprehensive plan that integrates all aspects of the SOW to accomplish efficient and effective management.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References:			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

#### SCOPE:

The Contractor shall deliver a Management Plan as described below. The plan shall be comprehensive in nature and integrate all management systems of the contractor, any significant vendors, any teaming or partnering arrangements, and Associate Contractor Agreements (ACAs).

After approval, the Management Plan will become part of the contract.

#### CONTENT:

At a minimum, the Management Plan shall address the following elements:

- Project Management
- Contract Management
- Earned Value Measurement and Reporting
- Risk Management
- System Engineering Management
- Safety and Mission Assurance Plan
- Project Performance Assessment Plan
- Contractor Work Breakdown Structure (CWBS)

The content of each section is defined below:

##### 1. Project and Contract Management

- Describe the organizational structure including an organizational chart. Describe each organization related to the performance of the work under this contract and its role in performing that work.
- Describe the communication channels, lines of authority (including the line of succession if the contract, project, and technical managers are unavailable), reporting relationships and responsibilities of the project organization. Include in this discussion any subcontractors, consultants, or team members to illustrate their relationship within the structure or between the organizational elements and any other subcontractors or team members.
- Describe the Contractor's management approach, organization, and plans for accomplishing and managing all functions described in the SOW.
- Describe plans and approaches that will be used for subcontractor administration. Include a description of the nature and extent of work to be performed, roles and responsibilities, how management policies will be implemented, and how subcontractor work will be scheduled, controlled, reported and reviewed.
- Describe policies, plans, procedures, and methods for communicating with NASA contracting officer, contracting officer technical representative, and integrating organizations identified in the NASA C2V2 Project WBS and DRD-C2V2-14, Integration Products.
- Describe the overall staffing approach including the number and type of personnel, sources of the proposed staff, critical skills and how they are maintained, new hires and retention plans, and consultant-usage plans.

- Describe the project management processes used by the project to manage the progress of the project and track and identify issues and emerging concerns.
2. Earned value Measurement and Reporting
    - Describe Contractor's approach to earned value measurement and reporting in accordance with the requirements of NFS 1852.234-1, Notice of Earned Value Management System and NFS1852.234-2, Earned Value Management System.
  3. System Engineering Management
    - Provide the specifics of the technical effort and describes what technical processes will be used, how the processes will be applied using appropriate activities, how the project will be organized to accomplish the activities, and the cost and schedule associated with accomplishing the activities as specified in NPR 7123.1.
    - Describe the hardware and software development and test processes
    - Describe the process for identifying and tracking technical performance metrics
  4. Risk Management
    - Description of the contractor's process for compliance with SSP 50175 and NPR 8000.4A
    - Describe the contractor's processes to provide risk management at all levels with 1) a disciplined system for early identification of technical uncertainties, 2) a disciplined assessment of current project status, and 3) key indicators of mission success.
    - Describe the basis for taking action to control risk and for measuring the effectiveness of that action.
    - Describe the process to convert risk data into decision-making information. This process should include estimating the probability, impact and time frame of the risks, eliminating duplicate risks (including grouping similar risks) and prioritizing risks according to consequences.
    - Describe the process to develop mitigation options and decide what to do with the risks.
    - Describe the process to acquire, compile and report risk status data, including risk indicators and mitigation actions. Appropriate risk metrics shall be identified so that the Government can evaluate the quality of the risk management.
    - Describe the method for communicating risks to all team members.
  5. Safety and Mission Assurance (S&MA)
    - System Safety portion shall describe the contractor's process for establishing system safety tasks and activities to identify, evaluation and eliminate or control hazards associated with space flight hardware and related operations in accordance with NPG 8715.3, SSP 30599, SSP 30309, and SSP 50021 (as specified between SSP 41000 and SSP 41162).
    - Reliability and Maintainability portion shall describe the contractor's process for compliance with SSP 30324.
    - Software Assurance portion shall describe the contractor's processes for software safety (SSP 30309), software quality assurance (SSP 41173), software quality engineering (SSP 41173), software management plan (SSP 50482), and software certification (SSP 50287).
    - Additionally, the S&MA plan shall include the following:
      - a) Definition of the hardware and software safety and mission assurance tasks as integral parts of all phases of the project.
      - b) Definition of the safety, reliability, and maintainability of hardware and software and operations through analyses, tests, reviews and assessments.
      - c) Method for providing timely status reporting through periodic project reviews and as part of overall project status reports.
      - d) Ensuring compatible safety and mission assurance requirements among manufacturing, testing, launch and ground operations sites.
  6. Project Performance Assessment
    - Describe the contractor's overall approach to contract performance assessment, quality, performance metrics and the implementation process for accomplishing metric gathering, evaluation, and reporting. The scope of the performance assessment includes all products specified in the SOW, regardless of the performing organization (e.g. contractor or subcontractor).
    - Describe the contractor's proposed metrics for assessing performance with respect to cost, schedule, quality, technical elements, and adjusting to changing requirements, including rationale.
  7. Contract Work Breakdown Structure (CWBS)

- The CWBS shall subdivide the total contracted effort into elements that serve as the basis for detailed planning and control of the project and permit collection of cost and schedule data at element level. These elements include hardware, software, data products, integration tasks, etc. It shall include all subcontracting and major procurement efforts at the appropriate level.
- The CWBS shall be product-oriented and structured so that key SOW tasks are at an appropriately high level.
- The CWBS shall be provided to a level sufficient to provide insight into individual work elements associated with the delivery of each product throughout the project's life cycles (i.e., at least 2 levels below that shown in the NASA project WBS).
- The CWBS Dictionary shall define the scope of each WBS element and describe in narrative form the tasks included in each element
- The CWBS shall map to the Project WBS outlined in the SOW Appendix A.

**FORMAT:**

Electronic format in Microsoft Word. Hard copy of final revision shall be delivered to Contracting Officer.  
Electronic distribution of final revision to all others on distribution

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
OE/S&MA Representative  
OH/Performance Assessment Representative  
EV/C2V2 Chief Engineer

**SUBMISSION:**

- Initial: Due with proposal (per instructions in section L).
- Final: Contract award + 30 days, via EDMS workflow and hardcopy to BG/Contracting Officer.
- Approval: Contract start + 60 days, via EDMS workflow
- Frequency: As required based on changes, via EDMS workflow

**MAINTENANCE:**

Revisions shall be incorporated by change page or complete reissue.

**REMARKS:**

None

1a. DRD Title Contract Schedules	2. Date of current version	3. DRL Line Item No. C2V2-04	RFP/Contract No.  NNJ11393918R
1b. Data Type: 3			
4. Use:  To provide schedules using established standard processes, data structures and reporting conventions to plan, manage, and report the assigned work for the ISS Program Office			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: RFP Section F Attachment J-5			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

##### SCOPE:

The Contractor shall deliver the following schedules:

- Integrated Master Schedule (IMS)
- High-level schedule

Schedules for this Contract shall include, as a minimum, hardware and software status, analytical products, ground and flight support equipment, supplier and subcontractor milestones, and government furnished equipment with linkages to C2V2 integrated project schedule. The resource loaded schedules in this DRD shall reconcile with the data reported in NF 533, DRD C2V2-08 and Project Management Review Package, DRD C2V2-11 for authorized work.

##### CONTENT:

The contractor shall provide schedules which clearly depict the interrelationships and constraints among related tasks consistent with the CWBS. The contractor is encouraged to utilize modern manufacturing resource planning, industrial engineering techniques and other approaches to ensure schedule stability, accuracy, reliability, predictability, and achievability.

1. The Contractor shall develop, maintain, and provide monthly status to ensure a consistent, accurate, and stable scheduling approach that provides for the identification, coordination, sequencing, control, implementation and tracking of all Contractor activities.
2. The schedule shall provide the ability to fully identify, analyze, mitigate and control scheduling risks and impacts; accurately identify and analyze critical and high risk activities; and allow its users to easily measure the progress towards achieving the intended plan.
3. The schedule shall represent the scheduled work and the requirements commitment from all interfacing organizations. The IMS shall be extended and expanded as the contract, options, or agreements unfold and additional insight is needed
4. The IMS shall designate the critical path and external dependencies. The IMS shall also include, but not be limited to: engineering development tasks, Contractor tests, design reviews, production and delivery schedules with planned vs. actual, key milestones, Government tests, design and technical reviews, in process reviews, Project Management Reviews (PMRs) (DRD C2V2-11), software development, test, and software integration.
5. Provide a Microsoft Project schedule that will represent full detail of project tasks and vendor/subcontractor schedules. Each activity must, at a minimum, contain the following information:
  - Unique, fixed Activity ID (Cannot exceed 12 digits)
  - Contact WBS
  - Activity Title

- Baseline Start and Finish dates which support latest approved baseline for authorized work
  - Actual Start and Finish dates
  - Original Duration
  - Percent complete
  - Predecessors (including Type and Lag), if any are assigned
  - Successors (including type and Lag), if any are assigned
6. Schedule consistency as used in this DRD is defined as the degree to which the contractor utilized standardized scheduling approaches between similar processing activities and flows. Accurate scheduling as used in this DRD is defined as the accurate representation of work content and tasks duration (predicted vs. actuals). A stable schedule as used in this DRD refers to the degree to which daily schedule changes are minimized and limited to unforeseen hardware/software problems or NASA-directed changes.
  7. The IMS shall define the functionality planned for each software release as specified in Contract Section J.5.
  8. Scheduling approaches shall address the following information as a minimum
    - a) Scheduling symbols that are consistent Project Management Institute general guidelines.
    - b) Predicted task duration/labor standards derived from accurate and objective prediction methodologies
    - c) Indications of activities by appropriate nomenclature that clearly delineates the task to be performed
    - d) Identification of who is responsible for doing the actual work and the resource plan
    - e) Required supporting activities or support from other contractors, outside organizations, agencies, or NASA centers.
    - f) Identification of critical resource requirements.
    - g) Clear depiction of the interrelationships and constraints among related tasks
    - h) Identification of priorities, high risk activities and other significant activities
    - i) Special test activities or requirements.
  9. The high-level schedule shall depict key milestones and deliverables with focus on major events that must be accomplished prior to key deliveries (e.g., first flight units required for on-orbit activation). The content of this schedule shall be proposed by the contractor and agreed to by the COTR at the Contract kick-off meeting defined in the SOW.

**FORMAT:**

IMS shall be in Microsoft Project format. The high-level schedule format shall be proposed by the Contractor and agreed to by the COTR at the Contract kick-off meeting.

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
 Other: BG/Contracting Officer  
 EV/C2V2 Subsystem Manager  
 EV/Chief Engineer

SUBMISSION:

- i. Initial: Due with proposal (per instructions in section L).
- ii. Baseline: Contract award + 30 days, via EDMS workflow
- iii. Frequency:
  - IMS -Monthly as part of the Monthly Project Report (DRD C2V2-10),
  - High-level Schedule - Monthly as part of the Monthly Project Report (DRD C2V2-10),  
Post-CDR informal submittals weekly for weekly status teleconference as defined in SOW

MAINTENANCE:

As required to reflect forward schedule

REMARKS:

None

1. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Government Property Management Plan		C2V2-05	NNJ11393918R
1b. Data Type: 1			
4. Use: To describe the method of administering and controlling Government personal property.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: FAR 52.245-1			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:** The Government Property Management plan defines the contractor's use, maintenance, repair, protection, and preservation of Government personal property. It shall describe the contractor's approach to receiving, handling, stocking, maintaining, protecting, and issuing Government property. The Plan should include interaction and Departmental/Office responsibilities. The delegated Property Administrator will request detailed procedures after contract start.

**CONTENTS:** This plan shall reference those policies and procedures, which constitute the contractor's Property Management Manual and shall include at a minimum the following categories:

- Property Management
- Acquisition
- Receiving
- Records
- Physical Inventories
- Reports
- Utilization
- Maintenance
- Subcontractor Control
- Disposition
- Contractor Closeout
- Reconcile Contractor Records with Financial Records
- Center-Unique Considerations



**FORMAT:**

Contractor format is acceptable, electronic format.

**DISTRIBUTION:**

OPR: JB/Government Property Representative

Other: BG/Contracting Officer

OD/Contracting Officer's Technical Representative

**SUBMISSION:**

i. Initial: Due with proposal as per Section L

ii. Final: Due 30 days after contract award via EDMS workflow

iii. Frequency: Initial, with updates as required via EDMS workflow

**MAINTENANCE:**

Changes shall be incorporated by change pages or complete reissue.

**REMARKS:**

None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-06	RFP/Contract No. NNJ11393918R
Configuration Management Plan			
1b. Data Type: 1			
4. Use: Describes the assignment of responsibility organizationally and the procedures used in accomplishment of the specific configuration management requirements as stated in SSP 41170.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: SSP 41170, Configuration Management Requirements			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

SCOPE: This Configuration Management plan defines the requirements, responsibilities, and procedures for the contractor's CM system pursuant to SSP 41170, as it applies to this contract.

#### CONTENT:

##### 1. Management Organization

##### 2. Configuration Identification (CI)

- Selection of CIs (Hardware, CSCIs, and firmware),
- Establishment of the functional, allocated and product baselines,
- Assignment and application of configuration identifiers including serial numbers, part numbers, lot codes, software and firmware identifiers.

##### 3. Configuration Control

- Establishment of internal configuration and contractual baselines,
- Implementation of Internal and NASA configuration control,
- Establishment of configuration control boards and processes,
- Identification of processes to control changes, deviations, and waivers to project baselines (both class I and class II),
- Subcontractor and vendor control,
- Systems and tools.

##### 4. Configuration Status Accounting (CSA)

- Hardware/Software Configuration Status Accounting processes and provisions for reports and/or access to CSA data.
- Description and methods of processes and tools to provide:
  - Identification of current approved configuration documentation and configuration identifiers associated with each CI,
  - Status of proposed engineering changes from initiation to implementation
  - Waiver/deviation status and processing,
  - Results of configuration audits; status and disposition of discrepancies,
  - Traceability of changes and confirmation of change incorporation,
  - Methods of access to information,
  - Retention of historical data,
  - Systems and tools (including data elements).

##### 5. Configuration Verification/Audits

- Audit conduct, policies, procedures, documentation, access, and support.
- Processes, plans, schedules for internal CM audits and subcontractor CM audits.

#### 6. Data Management

- Development, approval, release and submittal of configuration data/documentation (including drawings) in relation to program and contractual events (DRDs, technical reviews, FCA/PCA, Acceptance reviews, COFR, etc.).
- Plan for subcontractor data management deliveries/control and access,
- Establishment and operation of Engineering Release Unit and CM receipt desk, Document Quality Assurance process for Documentation control (i.e., DCNs), retention of historical data, systems and tools.

#### FORMAT:

MS Word or a format as negotiated with NASA COTR

#### DISTRIBUTION:

OPR: OH/Configuration Management Representative  
Other: BG/Contracting Officer  
OD/Contracting Officer's Technical Representative

#### SUBMISSION:

- i. Initial: Thirty (30) calendar days after Contract Award, via EDMS workflow.
- ii. Final: Contract award + 75 days, via EDMS workflow
- iii. Frequency: Annual, via EDMS workflow

#### MAINTENANCE:

The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

#### REMARKS:

None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-07	RFP/Contract No.  NNJ11393918R
Information Technology (IT) Security Management Plan and Reports			
1b. Data Type: Plan – Type 1 Report – Type 2			
4. Use:  Defines IT plans and reports that document the contractor's compliance with Federal and NASA IT regulations and requirements			5. DRD Category:  <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: NPR 2810.1A, NPD 2810.1A, NFS 1852.204-76			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:**

The contractor shall submit an IT security management program plan for its unclassified technology information resources. This program plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract. The Contractor's IT security management program plan shall be compliant with the IT security requirements in accordance with Federal and NASA policies as referenced in OMB Circular A-130 (Management of Federal Information Resources), and NPR 2810.1A (Security of Information Technology). See the CIO-Procurement Website for any supporting documentation.

**CONTENT:**

i) **IT SECURITY PLAN(S)**

The contractor shall have a line manager who is responsible for the contractor's systems in accordance with the definitions set forth in NPR 2810.1A. The IT security plan shall be kept up to date as changes to the baseline configuration of the system occur and shall be documented in the IT Security Plan.

Note: An IT Security Plan is specific to a system or group of systems, while an IT Security Management Program Plan is defined as the elements a contractor has outlined to meet the IT Security requirements for interfacing with other contractors and NASA, training requirements and meeting the requirements in NPR 2810.1A.

ii) **INFORMATION ON EMPLOYEES IN SENSITIVE AUTOMATED INFORMATION SYSTEMS (AIS) POSITIONS/ASSIGNMENTS REPORT**

The contractor shall submit an annual report on employees in sensitive IT positions/assignments which shall include information for personnel screening as required by the NASA Procurement Information Circular (PIC) 02-04, NPR 2810.1A, and NPR 1600.1 on position risk. This report shall be compiled on an annual basis.

FORMAT: Electronic Format consistent with NPR 2810.1A. Microsoft Office or PDF format

DISTRIBUTION:

OPR: Chief Information Officer (CIO) Representative to Procurement  
Other: BG/Contracting Officer  
OD/Contracting Officer's Technical Representative

SUBMISSION:

- i. Initial: Contract award + 30 days, via EDMS workflow with hard copy to OPR only.
- ii. Approval: Contract start + 60 days, via EDMS workflow with hard copy to OPR only.
- iii. Frequency: Annually by September 30, via EDMS workflow with hard copy to OPR only.

MAINTENANCE:

As defined in NPR 2810.1A

REMARKS:

Revisions to this DRD shall be incorporated by change page or complete reissue.

1. DRD Title NF533 Cost and Data Reporting	2. Date of current version	3. DRL Line Item No. C2V2-08	RFP/Contract No. NNJ11393918R
1b. Data Type: 3			
4. Use: Provide summary level cost reporting to the ISS Program Office for evaluation of the contractor's actual cost and fee, planning, monitoring, and controlling of project and program resources, and accruing cost.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: NPR 9501.2E			7. Interrelationships:

8. PREPARATION INFORMATION:

The NASA Form 533 (NF533) reports provide data necessary for the following:

1. Projecting costs and hours to ensure that dollar and labor resources realistically support project and program schedules.
2. Evaluating contractors' actual cost and fee data in relation to negotiated contract value, estimated costs, and budget forecast data.
3. Planning, monitoring, and controlling project and program resources.
4. Accruing cost in NASA's accounting system, providing program and functional management information, and resulting in liabilities reflected on the financial statements.

Cost is a financial measurement of resources used in accomplishing a specified purpose, such as performing a service, carrying out an activity, acquiring an asset, or completing a unit of work or project. NASA Procedural Requirements (NPR) 9501.2E entitled "NASA Contractor Financial Management Reporting," or its most current revision, identifies the cost reporting requirements for a contract. An NF533 format is provided in *Appendix A, NF533 Format*.

NASA is required by law to maintain accrual accounting, which requires cost to be reported in the period in which benefits are received, without regard to time of payment.

The reports (NF533M [Monthly] and NF533Q [Quarterly]) are the official cost documents used at NASA for cost type, price determination, and Fixed Price Incentive contracts. The data contained in the reports must be auditable using Generally Accepted Accounting Principles (GAAP). Supplemental cost reports submitted in addition to the NF533 must be reconcilable to both the NF533M & NF533Q.

Reports shall be produced at two different levels and in two different categories (Fixed Price [FP] and Level of Effort [LOE]), if required. Procedures to account for all FP and LOE areas and contract activities in the Contractor Work Breakdown Structure (CWBS) shall be developed and maintained. Lower-level detail reporting on some areas/activities may be combined or accepted in supplemental reports to the 533M and 533Q upon CFO Resource Management Office (RMO) and Contracting Officer approval.

### **Common NF533 Cost Elements**

Examples of accrual accounting for common cost elements reported on the NF533 follow:

<b>Cost Elements</b>	<b>Definitions</b>
<i>Labor</i>	Reported to NASA as hours are incurred in the following classifications: <ul style="list-style-type: none"> <li>• Straight Time Direct Hours</li> <li>• Overtime Direct Hours</li> <li>• Total Direct Hours</li> <li>• Straight Time Indirect Hours</li> <li>• Overtime Indirect Hours</li> <li>• Total Indirect Hours</li> <li>• Total Labor Hours</li> <li>• Total WYEs/EPs</li> </ul>
<i>Equipment &amp; Materials (commercial off the shelf)</i>	Generally reported to NASA when received and accepted by the contractor.
<i>Manufactured Equipment</i>	Defined as any equipment that is produced to specific requirements that make it useless to anyone else without rework. Cost should be reported to NASA as the equipment is being manufactured. The straight-line method for estimating accrued costs, or the use of supplemental information obtained from the vendor, are acceptable methods used to calculate the cost accrual amount.
<i>Leases</i>	Reported to NASA using a proration over the life of the lease.
<i>Travel</i>	Reported to NASA as costs are incurred.
<i>Subcontracts &amp; Other Direct Costs</i>	Actual and estimated costs reported by prime contractors shall include subcontractors' incurred costs for the same accounting period. Where subcontract costs are material, they should be separately identified on NF533 reports. The prime contractor shall include in the total cost of each subdivision of work the accrued cost (including fee, if any) of related subcontractor effort. Subcontractors should, therefore, be required to report cost to the prime contractor, using the accrual method of accounting. If the G&A and fee reported by a subcontractor are at the total subcontractor level, these costs must be allocated to specific sub- divisions of work. Data submitted by the subcontractor should be structured similar to the prime contractor's NF533 to enable the prime contractor to properly report to NASA. For Firm Fixed Price subcontracts with a contract value greater than \$500,000, the prime contractor is required to document the methodology used to generate the sub-contractor costs reported and provide this information to the NASA Contracting Officer and Center Deputy Chief Financial Officer of Finance.
<i>Unfilled Orders</i>	Reported as the difference between the cumulative cost incurred to date and amounts obligated to suppliers and subcontractors.

<i>Fee</i>	Fee should be reported on the NF533 following the "Total Cost" line. Award fee must be reported by the following categories: Base Fee, Fee Earned, Interim Fee, Provisional Fee, Potential Additional Fee, and Total Fee. If any of the above fee categories do not pertain, they should not be included in the NF533.
<i>Prompt Payment Discounts</i>	Cumulative cost reported to NASA should be the full incurred cost. The prompt payment discount amount taken should be reported as a separate line item on the NF533 below the cumulative cost amounts for the contract.



### **Common NF533 Data Elements**

The following NF533 Data Elements shall be included:

<b>Data Element Name</b>	<b>Description</b>
<i>Reporting Category (RC)</i>	Task, Delivery Order, Work Breakdown Structure
<i>Cost Incurred for Month (7a)</i>	Prior month actual cost incurred for each RC (column 7a on NF533)
<i>HR/WYE Incurred for Month (7a)</i>	Prior month actual HR/WYE incurred for each RC (column 7a on NF533)
<i>Contract prior month planned cost (7b)</i>	Planned cost for prior month for each RC (column 7b on NF533)
<i>Contract ITD cost (7c)</i>	Contract ITD cost for each RC (column 7c on NF533)
<i>Contract planned ITD cost (7d)</i>	Contract planned ITD cost for each RC (column 7d on NF533)
<i>Current month estimated cost (8a)</i>	Cost estimate for the current month for each RC (column 8a on NF533)
<i>Current month estimated HR/WYE (8a)</i>	HR/WYE estimate for the current month for each RC (column 8a on NF533)
<i>Next month estimated cost (8b)</i>	Estimated cost for next month for each RC (column 8b on NF533)
<i>Balance of Contract (8c)</i>	Balance of contract for the remaining estimate to complete for each RC (column 8c on NF533)
<i>Contractor Estimate (9a)</i>	Contractor estimate for the total estimate to complete entire scope of contract for each RC (column 9a on NF533)
<i>Contract Value (9b)</i>	Contract value based upon contract modifications for each RC (column 9b on NF533)
<i>Unfilled orders outstanding (10)</i>	Unfilled orders outstanding at the end of the reporting period for each RC (column 10 on NF533)
<i>Reporting Category level</i>	Used by NASA's accounting system to determine the RC level
<i>Reporting Category Identifier</i>	Identifies if the RC is a actual Reporting Category or a Sub-Reporting Category

A Reporting Category (RC) correlates to a task order, delivery order, or Work Breakdown Structure (WBS) and is the level at which cost is reported. Each RC can have Sub-Reporting Category line items (detailed cost elements) that add up to a RC. **The Contractor is required to coordinate with the NASA Resource Analyst assigned to the contract in order to establish and maintain the Reporting Categories the contractor shall use to comply with this data requirement.**

Column 7b (planned cost incurred/hours worked for the month) and 7d (cumulative planned cost incurred/hours worked) of the NF533M represent the negotiated baseline plan for the contract. There may not be a relationship between the estimates provided in columns 8 of the NF533M to columns 7b and 7d. Columns 7b and 7d represent the legally binding contract negotiated baseline plan plus all authorized changes.

Uncompensated overtime hours worked should be reported on NF533 reports as a separate line item or in the footnotes.

Short and long-term cost estimates, which include all data entered in columns 8 and 9a on the NF533M and NF533Q reports, shall be based on the most current and reliable information available.

Prior period cost adjustments should be reported in column 7a and 7c of NF533M and column 7a of the NF533Q as soon as identified with a footnote discussing the reasons for and amounts of the adjustments and time period the adjustment relates to, delineated by government fiscal year, if affecting more than one fiscal year.

### **Personal Property & Equipment Reporting**

For all Personal Property & Equipment, purchased or fabricated, the contractor must obtain the NASA capitalization determination from the NASA Center Finance Property office prior to cost being incurred to ensure items identified as capital are properly reported on the 533. The NASA capitalization determination governs the contractor cost reporting requirements associated with the acquisition or fabrication.

For all Personal Property & Equipment purchased or fabricated, determined by NASA to be capital in nature, the NF533 reporting structure shall

1. Report the costs of each identified capital asset, as a separate reporting category on the NF 533.
2. Maintain a reporting structure that allows for the accumulation and reporting of cost separately for each identified capital asset

Capital property is defined by NASA as personal property and equipment, acquired or fabricated, that NASA will have title to and that meets all of the following criteria:

1. Has a total acquisition cost equal to or greater than \$100,000
2. Has a useful life equal to or greater than 2 years
3. Is not intended for sale in the course of normal operations
4. Has been acquired or constructed with the intention of being used, or available for use, by NASA
5. Has a current, or planned alternative future use on another project with a separate objective.

The NASA Center Finance Property Office makes the final capitalization determination based on information provided by the NASA Program or Project manager in the NF1739 Alternative Future Use Questionnaire (AFUQ) and other supplemental information.

### **NF533 Due Dates**

The due dates for the NF533M and NF533Q reports are outlined in Chapter 3 of NPR 9501.2E. The following is a summary of the NF533 due date requirements:

<b>NF533 Report</b>	<b>Due Date</b>
<i>NF533M</i>	Due no later than 10 working days following the close of the contractor's monthly accounting period, but not later than the 15 <sup>th</sup> day of the calendar month.
<i>NF533Q</i>	Due no later than the 15 <sup>th</sup> calendar day of the month preceding the quarter being reported.

The due dates reflect the date the NF533 reports are received by personnel on the distribution list, not the date the reports are generated or mailed by the contractor. It is critical that the NF533 reports are submitted in a timely manner to ensure adequate time for NASA to analyze and record the cost into the NASA accounting system.

An initial NF533 report is required in the NF533Q format to be used as a baseline for the life of the contract. The initial (baseline) NF533Q report shall be submitted by the contractor within 30 days after authorization to proceed has been granted. The initial report shall reflect the original contract value detailed by negotiated reporting categories and shall be the original contract baseline plan. In addition to the initial (baseline) report, monthly NF533 reporting shall begin no later than 30 days after the incurrence of cost.

### **NF533 Final Submission Upon Contract Completion**

Monthly NF533 reporting is no longer required once the contract is physically complete, provided the final cost report includes actual cost only (no estimates or forecasts). The contractor must continue to submit monthly NF533 reports as long as estimates for the following period are included. If the final cost of a contract changes after the submission of the "final" contractor cost report, the contractor must submit a revised NF533 report in the month the cost change is recognized.

### **NF533 Report Distribution**

LF6	Cost Accounting (1 hardcopy)
BG	Contracting Officer (1 hardcopy)
LO	Budget/Program Analyst (1 hardcopy)
OH	Technical (2 electronic copy)
OD	Contracting Officer Technical Representative (1 electronic copy)

### **NF533 Supplemental Reporting**

Supplemental reporting requirements will be submitted during the course of the contract in accordance with direction in *Appendix B, Required Supplemental Reporting*.

### **Electronic NF533 Flat File**

Electronic NF533 Flat File Requirement will only be submitted, if requested, during the course of the contract in accordance with direction in *Appendix C, Electronic NF533 Flat File Instructions*.

## APPENDIX A - NF533 Format

[illegible]

## **APPENDIX B -Required Supplemental Reporting**

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**Annual Accounting Calendar:** The contractor's accounting calendar shall be provided in electronic format to the LO resource analyst, and LF6 Cost Accountant within 10 business days after contract award. An updated accounting calendar shall be submitted annually thereafter in conjunction with the delivery of the September NF533M.

**Contractor Variance Report:** The contractor shall submit variance reports along with the NF533M when NF533M variances meet or exceed +/- 5% for each Reporting Category for the following items:

1. Column 7A current month (actuals) to 8A previous month (estimate)
2. Column 7A current month (actuals) to 7B current month (plan)

**Monthly Unfilled Orders:** The contractor shall submit a report in conjunction with the delivery of the monthly NF533M if there are *Unfilled Orders Outstanding (10)*. The report shall be broken down by reporting category and include the item description, the originally reported delivery date and costs, updated delivery date and costs, justifications for delays of greater than 30 days, and justifications for changes in costs greater than 5%. The following format shall be used for this report.

A	B	C	D	E	F	G	H
Rept. Category	Item	Original Estimated Delivery Date	Adjusted Estimated Delivery Date	Justification for delays greater than 30 days	Original Estimated Costs	Adjusted Estimated Costs	Justification for cost changes greater than 5%

**Quarterly Estimate Report:** If the contractor's month-end reporting does not align with the last day of the calendar month, the contractor shall provide a supplemental report for each calendar-month ending a government fiscal quarter (December, March, June, and September). The report shall be broken down by reporting category and include the original and adjusted 533M *Current Month Estimated Cost and Hours* (8a) that reflects the estimated costs and hours accrued through the last day of the calendar month. All estimated costs shall include unfilled orders expected to be delivered during the adjusted period. The following format shall be used for this report.

A	B	C	D	E	F	G
Reporting Category	533M Current Month Estimate (8a) - Costs	533M Current Month Estimate (8a) - Hours	Current Month Est. Adj. (Costs)	Current Month Est. Adj. (Hours)	Total Adj. Current Month Est. (Costs)	Total Adj. Current Month Est. (Hours)
					= B + D	= C + E

**Annual Economic Impact Assessment:** The contractor shall submit answers to the following four questions back to the LO resource analyst in conjunction with the delivery of the October NF533M. The answers should be estimates only, as this requirement is not intended to be an extensive exercise. The information provided will be rolled-up to create Center-level estimates, and will not identify any specific contract. This information will not be shared at the contract-level with anyone outside NASA.

1. What was the on-board total headcount for this contract as of September 30<sup>th</sup>? (Please include in-directs and an estimate for your major subcontractors.)
2. For the total workforce indicated in #1 above, approximately how many worked in the local Clear Lake area, including JSC? (JSC includes JSC proper, Sonny Carter Training Facility, and Ellington Field.)
3. What was the approximate dollar value of goods and services (including labor) purchased in the Houston area under this contract during the prior Government Fiscal Year?
4. What was the approximate dollar value of goods and services (including labor) purchased outside the Houston area but within the State of Texas?

## APPENDIX C - Electronic NF533 Flat File Instructions

In addition to submitting the NF533M or NF533Q in a hardcopy format, the contractor, upon request, shall submit the NF533 electronically by the same due date as the hardcopy. The data shall be submitted via email using the Government prescribed flat file format (see attached Agency Defined File Format for an example of the layout details) and shall include the following header information from the hardcopy.

<b>Data Element</b>	<b>Description</b>
Contract Number	NASA assigned contract number
Modification Number	Latest definitive Modification Number
Accrual Date	Date the data was generated for
Report Period End Date	Period ending date of the NF533
Operating Days	Number of operating days for the current NF533
Date Received/Submitted	Date the report is submitted
CCR Format	Monthly (NF533M) or Quarterly (NF533Q)
Cost Unit of Measure	Unit of measure used to report cost on the NF533 report
HR/WYE Unit of Measure	Unit of measure used to report Hours/Work Year Equivalents (WYEs) on the NF533 report
Authorized Contractor Representative	Name of Contractor Approving Officer
Authorized Contractor Representative Date Signed	Date the NF533 is approved and signed by the authorized Contractor Representative
Monthly Grand Total Cost Incurred (7a)	Grand Total Actual Monthly cost for the prior month (column 7a on the NF533)
Monthly Grand Total HR/WYE (7a)	Grand Total Actual monthly hours/WYEs for the prior month (column 7a on the NF533)
Monthly Grand Total Cost Planned (7b)	Prior month planned cost (column 7b on the NF533)
Grand Total Cost Incurred ITD (7c)	Grand total contract cost from Inception to Date (ITD) (column 7c on the NF533)
Grand Total Planned Cost (7d)	Grand total planned contract cost (column 7d on the NF533)
Grand Total Estimated Cost (8a)	Grand total current month cost estimate (column 8a on the NF533)
Grand Total Estimated HR/WYE (8a)	Grand total current month HR/WYE estimate (column 8a on the NF533)
Grand Total Next Month Estimated Cost (8b)	Grand total next month cost estimate (column 8b on the NF533)
Grand Total Balance of Contract (8c)	Contract Balance for the remaining estimate to complete (column 8c on the NF533)
Grand Total Contractor Estimate (9a)	Contractor estimate to complete entire scope of contract (column 9a on the NF533)
Grand Total Contract Value (9b)	Contractor distribution of contract value by the reporting categories (column 9b on the NF533)
Grand Total Unfilled Orders Outstanding (10)	Unfilled order outstanding at the end of the reporting period (column 10 on the NF533)

The flat file shall be saved as a text file with no extension (do not include .txt after the file

name) and named in strict accordance with the specific format described in the attached Agency Defined File Format document.

File names must be provided in a specific format. Each file name will begin with the SAP 2 Character center abbreviation listed below. The contract number and date will be included in the file name as well. Below is a sample file name.

**MACFPS001\_NNJXXXXXXXXX\_yyyy\_mm\_dd**

**SAP 2 Charter Center Abbreviations**

Headquarters	HQ	Johnson	JO
Ames	AM	Kennedy	KE
Dryden	DR	Langley	LA
Glenn	GL	Marshall	MA
Goddard	GO	Stennis	ST



## Example File Format

### Header (Non-Repeating Segment)

CCR Extension Data Element	Description	Contractor Initial Data Mapping	NF 533 Required/ Optional	OTHER CCR Required/ Optional	Field Name	St Pos	End Pos	Len	Format
<b>HEADER:</b>									
Record Type	Used by eGate to determine record type	'HD' for Header	Required	Required	RECORD_TYPE	1	2	2	CHAR
Contract Number	Contract Number (1b)	Header field—submitted with CONTRACTOR data or defaulted by interface or extension	Required	Required	CONTRACT_NUMBER	3	12	10	CHAR
	Latest definitive Modification Number(CR8197)				MOD_NUMBER	13	18	6	CHAR
Accrual Date	Date the data was generated for. Used by SAP as part of Oracle table key	Accrual Date. MM01YYYY, where MM is the Accrual Month and YYYY is the fiscal year	Required	Required	ACCRUAL_DATE	19	26	8	DATE MM01YYYY
Report Period End Date	Report Period End Date is a date(2)	Header field—submitted with CONTRACTOR data or defaulted by interface or extension	Required	Required	REP_END_DATE	27	34	8	DATE
Operating Days	Operating days(2).	Header field—submitted with CONTRACTOR data	Required	Optional unless Required by contract	OPER_DAYS	35	40	6	NUMERIC
Date Received	Date Received (1d)	System Date upon which the cost data is loaded into the CCR Extension	Required	Required	DATE_REC	41	48	8	DATE
CCR Format	'M' for Monthly and 'Q' for Quarterly (SIR2047)	Submitted with CONTRACTOR data	Required	Required	CCR_FORMAT	49	49	1	CHAR
Cost Unit of Measure	Cost Unit of Measure (SIR2047)	Submitted with CONTRACTOR data	Required	Required	COST_UOM	50	51	2	CHAR
HR/WYE Unit of Measure	Hour/Work-Year-Equivalent Unit of Measure (SIR2047)	Submitted with CONTRACTOR data	Required	Required	HR_WYE_UOM	52	53	2	CHAR

CCR Extension Data Element	Description	Contractor Initial Data Mapping	NF 533 Required/ Optional	OTHER CCR Required/ Optional	Field Name	St Pos	End Pos	Len	Format
	Authorized Contractor Representative – Name of Contractor Approving Officer (CR 8197)				AUTH_SIGNATURE	54	78	25	CHAR
	Authorized Contractor Representative Date Signed – Date CCR is approved/signed by authorized contractor representative(CR 8197)				AUTH_SIGNATURE_DATE	79	86	8	DATE MMDDYYYY
Grand Total Cost Incurred Month (7a)	The Grand Total Contract Prior Month Actual Dollars Column 7a reports actual costs for the prior month.	Submitted with CONTRACTOR data	Required.	Optional. Only required if lower detailed line item data is submitted in monthly batch file.	GT_COST_INCUR_MONTH	87	99	13	CURRENCY(2)
Grand Total HR/WYE (7a)	The Grand Total Contract Prior Month Actual Hours Column 7a reports actual HR or WYE for the prior month.	Submitted with CONTRACTOR data	Required if detailed line item data is submitted in monthly batch file.	Required if detailed line item data is submitted in monthly batch file.	GT_HRWYE_PRIOR_MONTH	100	109	10	NUMERIC(1)
	The Grand Total Contract Prior Month Planned Dollars Column (7b) reports planned costs for the prior month. (CR8197)				GT_COST_PLANNED_MONTH	110	122	13	CURRENCY (2)
Grand Total Cost Incurred ITD (7c)	The Grand Total Contract Cost Dollars Column 7c which represents Contract Cost Inception to Date	Submitted with CONTRACTOR data	Required. Does not require detailed line item data if provided from Cost Incurred Month (7a)	Required if detailed line item data is provided for this column	GT_ITD_COST	123	135	13	CURRENCY (2)
	Grand Total Contract Planned Cost Dollars Column (7d) which represents Planned Contract Cost Inception to Date(CR 8197)				GT_COST_PLANNED_ITD	136	148	13	CURRENCY (2)

CCR Extension Data Element	Description	Contractor Initial Data Mapping	NF 533 Required/ Optional	OTHER CCR Required/ Optional	Field Name	St Pos	End Pos	Len	Format
Grand Total Estimated Cost (8a)	The Grand Total Contract Estimated Cost for first upcoming month, or Current Month Estimate for cost.	Submitted with CONTRACTOR data	Required	Required if detailed line item data is provided for this column	GT_EST_COST	149	161	13	CURRENCY (2)
Grand Total HR/WYE (8a)	The Grand Total Contract Estimated Hours for first upcoming month, or Current Month Estimate for HR/WYE.	Submitted with CONTRACTOR data	Required if detailed line item data is provided for this column	Required if detailed line item data is provided for this column	GT_HRWYE_FIRST_MONTH	162	171	10	NUMERIC (1)
Grand Total Next Month Estimated Cost (8b)	The Grand Total Contract Estimated Cost for second upcoming month or Next Month Estimate for cost.	Submitted with CONTRACTOR data	Required if detailed line item data is provided for this column	Required if detailed line item data is provided for this column	GT_NEXT_MONTH_EST	172	184	13	CURRENCY (2)
	Grand Total Balance of Contract for the remaining estimate to complete (CR 8197)				GT_BALANCE_CONTRACT	185	197	13	CURRENCY (2)
	Grand Total Contractor Estimate for the total estimate to complete entire scope of contract (CR 8197)				GT_BALANCE_CONTRACTOR_ESTIMATE	198	210	13	CURRENCY (2)
	Grand Total Contract Value based upon Contract Modifications (CR 8197)				GT_CONTRACT_VALUE	211	223	13	CURRENCY (2)
	Grand Total Unfilled Orders Outstanding at end of reporting period (CR 8197)				ST_UNFILLED_ORDERS	224	236	13	CURRENCY (2)

## Example File Format

### Detail (Repeating Segment)

CCR Extension Data Element	Description	Contractor Initial Data Mapping	NF 533 Required/ Optional	OTHER CCR Required/ Optional	Field Name	St Pos	End Pos	Len	Format
<b>CCR DETAIL LINE ITEMS:</b>									
Record Type	'DM' for Monthly column 7a Detail; 'DQ' for ITD Column 7c Detail	"RD" for Detail	Required	Required	RECORD_TYPE	1	2	2	CHAR
Reporting Category	Reporting Category (6)	Line item field—submitted with CONTRACTOR data	Required	Required	SERV_ORD_CATEGORY	3	26	24	CHAR
Cost Incurred Month (7a)	Prior Month incurred costs (ACTUALS) for given category.	Line item field—submitted with CONTRACTOR data	Required if detailed line item data is not provided from Cost Incurred Month (7c)	Determined by contract requirement-data from Column 7a, 7c or 8a	COST_INCURRED_MONTH	27	39	13	CURRENCY (2)
HR/WYE Incurred Month (7a)	Prior month incurred hours worked [Actuals] for given category..	Line item field—submitted with CONTRACTOR data	Optional unless Required by contract for WYE calculation	Optional unless Required by contract for WYE calculation	HRWYE_INCURRED_MONTH	40	49	10	NUMERIC (1)
	Contract Prior Month Planned Dollars Column (7b) reports planned costs for the prior month (CR 8197)				COST_PLANNED_MONTH	50	62	13	CURRENCY (2)
	Contract Cost Dollars Column (7c) which represents Contract Cost Inception to Date (CR 8197)				CUR_COST_INCURRED_ITD	63	75	13	CURRENCY (2)
	Contract Planned Cost Dollars Column (7d) which represents Planned Contract Cost Inception to Date (CR 8197)				COST_PLANNED_ITD	76	88	13	CURRENCY (2)
Current Month Estimated Cost (8a)	Estimated costs for first upcoming month for given category.	Line item field—submitted with CONTRACTOR data	Required.	Determined by contract requirement-data from Column 7a, 7c or 8a	CUR_MONTH_ESTEC	89	101	13	CURRENCY (2)
HR/WYE	Estimated hours	Line item	Optional unless	Optional unless	HRWYE_CUR_	102	111	10	NUMERIC (1)

CCR Extension Data Element	Description	Contractor Initial Data Mapping	NF 533 Required/ Optional	OTHER CCR Required/ Optional	Field Name	St Pos	End Pos	Len	Format
Current Month Estimate (8a)	for first upcoming month for given category. Will only be needed if labor hours are required to be submitted electronically per contract.	field—submitted with CONTRACTOR data	Required by contract for WYE calculation	Required by contract for WYE calculation	MONTH_EST				
Next Month Estimated Cost (8b)	Estimated costs for second upcoming month for given category.	Line item field—submitted with CONTRACTOR data	Required unless not part of Contract scope	Required unless not part of Contract scope	NEXT_MONTH_EC	112	124	13	CURRENCY (2)
	Balance of Contract for the remaining estimate to complete (8c) (CR 8197)				BALANCE_CONTRACT	125	137	13	CURRENCY (2)
	Contractor Estimate for the total estimate to complete entire scope of contract (9a) (CR 8197)				CONTRACTOR_ESTIMATE	138	150	13	CURRENCY (2)
	Contract Value based upon Contract Modifications (CR 8197)				CONTRACT_VALUE	151	163	13	CURRENCY (2)
	Unfilled Orders Outstanding at end of reporting period (CR 8197)				UNFILLED_ORDERS	164	176	13	CURRENCY (2)
	Used by SAP to determine Reporting Category Level (1.1.2.2.1) (CR 8197)				REPORTING_LEVEL	177	206	30	CHAR
	Fill in an "X" if record is a Reporting Category. Otherwise, leave blank for Sub-Reporting Category Line Items and Element of Cost detail records. This field is used by SAP to determine if the record is a Reporting Category. (CR 8197)				REPORTING_CAT_INDICATOR	207	207	1	CHAR

## Example File Format

### Sub-Reporting Category Line Items – Repeating Segment

Field Name	Start Pos	End Pos	Length	Format	Variable Repetition (?, *, +, n-n)	Description
SUB_RECORD_TYPE	1	2	2	CHAR		'SM' for Monthly column 7a Detail; 'SQ' for ITD column Detail
SUB_REP_CAT	3	26	24	CHAR		Reporting Category
SUB_COST_INCUR_MONTH	27	39	13	CURRENCY (2)		Prior month incurred costs (Actuals) for given category.
SUB_HRWYE_INCUR_MONTH	40	49	10	NUMERIC (1)		Prior month incurred hours worked (Actuals) for given category.
SUB_COST_PLANNED_MONTH	50	62	13	CURRENCY (2)		Contract Prior Month Planned Dollars Column <b>(7b)</b> reports planned costs for the prior month.
SUB_CUR_COST_INCUR_ITD	63	75	13	CURRENCY (2)		Contract Cost Dollars Column <b>(7c)</b> which represents Contract Cost Inception to Date.
SUB_COST_PLANNED_ITD	76	88	13	CURRENCY (2)		Contract Planned Cost Dollars Column <b>(7d)</b> which represents Planned Contract Cost Inception to Date.
SUB_CUR_MONTH_EC	89	101	13	CURRENCY (2)		Estimated costs for first upcoming month for given category <b>(8a)</b> .
SUB_HRWYE_CUR_MONTH_EST	102	111	10	NUMERIC (1)		Estimated hours for first upcoming month for given category. Will only be needed if labor hours are required to be submitted electronically per contract <b>(8a)</b> .
SUB_NEXT_MONTH_EC	112	124	13	CURRENCY (2)		Estimated costs for second upcoming month for given category <b>(8b)</b> .
SUB_BALANCE_CONTRACT	125	137	13	CURRENCY (2)		Balance of Contract for the remaining estimate to complete <b>(8c)</b> .
SUB_CONTRACTOR_ESTIMATE	138	150	13	CURRENCY (2)		Contractor Estimate for the total estimate to complete entire scope of contract <b>(9a)</b> .
SUB_CONTRACT_VALUE	151	163	13	CURRENCY (2)		Contract Value based upon Contract Modifications <b>(9b)</b> .
SUB_UNFILLED_ORDERS	164	176	13	CURRENCY (2)		Unfilled Orders Outstanding at end of reporting period.
REPORTING_LEVEL	177	206	30	CHAR		Used by SAP to determine Reporting Category Level (1.1.2.2.1) <b>(CR 8197)</b> .
REPORTING_CAT_INDICATOR	207	207	1	CHAR		Fill in an "X" if record is a Reporting Category. Otherwise, leave Blank for Sub-Reporting Category Line Items and Element of Cost detail records.  This field is used by SAP to determine if the record is a Reporting Category. <b>(CR 8197)</b>

## Example File Format

### 533 Agency FILE RECORD LAYOUT (*Element of Cost Detail – Repeating Segment (CR8197)*)

Field Name	Start Pos	End Pos	Length	Format	Variable Repetition (?,*+,n-n)	Description
RECORD_TYPE	1	2	2	CHAR		'EM' for Monthly column 7a Detail; 'EQ' for ITD column Detail
EOC_REP_CAT	3	26	24	CHAR		Reporting Category
EOC_COST_INCUR_MONTH	27	39	13	CURRENCY (2)		Prior month incurred costs (Actuals) for given category.
EOC_HRWYE_INCUR_MONTH	40	49	10	NUMERIC (1)		Prior month incurred hours worked (Actuals) for given category.
EOC_COST_PLANNED_MONTH	50	62	13	CURRENCY (2)		Contract Prior Month Planned Dollars Column <b>(7b)</b> reports planned costs for the prior month.
EOC_CUR_COST_INCUR_ITD	63	75	13	CURRENCY (2)		Contract Cost Dollars Column <b>(7c)</b> which represents Contract Cost Inception to Date.
EOC_COST_PLANNED_ITD	76	88	13	CURRENCY (2)		Contract Planned Cost Dollars Column <b>(7d)</b> which represents Planned Contract Cost Inception to Date.
EOC_CUR_MONTH_EC	89	101	13	CURRENCY (2)		Estimated costs for first upcoming month for given category <b>(8a)</b> .
EOC_HRWYE_CUR_MONTH_EST	102	111	10	NUMERIC (1)		Estimated hours for first upcoming month for given category. Will only be needed if labor hours are required to be submitted electronically per contract <b>(8a)</b> .
EOC_NEXT_MONTH_EC	112	124	13	CURRENCY (2)		Estimated costs for second upcoming month for given category <b>(8b)</b> .
EOC_BALANCE_CONTRACT	125	137	13	CURRENCY (2)		Balance of Contract for the remaining estimate to complete <b>(8c)</b> .
EOC_CONTRACTOR_ESTIMATE	138	150	13	CURRENCY (2)		Contractor Estimate for the total estimate to complete entire scope of contract <b>(9a)</b> .
EOC_CONTRACT_VALUE	151	163	13	CURRENCY (2)		Contract Value based upon Contract Modifications <b>(9b)</b> .
EOC_UNFILLED_ORDERS	164	176	13	CURRENCY (2)		Unfilled Orders Outstanding at end of reporting period.
REPORTING_LEVEL	177	206	30	CHAR		Used by SAP to determine Reporting Category Level (1.1.2.2.1) <b>(CR 8197)</b> .
REPORTING_CAT_INDICATOR	207	207	1	CHAR		Fill in an "X" if record is a Reporting Category. Otherwise, leave Blank for Sub-Reporting Category Line Items and Element of Cost detail records.  This field is used by SAP to determine if the record is a Reporting Category. <b>(CR 8197)</b>

## Example File Format

Trailer (provides the number of header & detail records sent from the contractor/vendor/center in order to verify the receipt of complete data after transmission)

CCR Extension Data Element	Description	Contractor Initial Data Mapping	NF 533 Required/ Optional	OTHER CCR Required/ Optional	Field Name	Start Pos	End Pos	Length	Format
<b>TRAILER:</b>									
Record Type	Used by eGate to determine record type	"TL" for Trailer	Required	Required	RECORD_TYPE	1	2	2	CHAR
Record Count	Count of the number of Detail records sent to process (Detail Only)	Trailer field submitted with CONTRACTOR data	Required	Required	RECORD_COUNT	3	9	7	NUMERIC
	Value of spaces				FILLER	10	207	198	CHAR



1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-09	RFP/Contract No. NNJ11393918R
Contract Close-out Plan			
1b. Data Type: 1			
4. Use: Define contractor close-out activities and cost			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References:			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:**

This plan shall provide the details necessary to transition the contract to any follow-on contract and to close out the existing contract

**CONTENT:** The content of the deliverables shall include:

- (a) Implementation Strategy
- (b) Task description and schedule
- (c) Staffing profile
- (d) Cost Estimate

**FORMAT:**

MS Word or a format negotiated with the NASA Contracting Officer

**DISTRIBUTION:**

OPR: BG/Contracting Officer  
Other: OD/Contracting Officer's Technical Representative

**SUBMISSION:**

Initial: Once, 1 year prior to end of contract via EDMS workflow

**MAINTENANCE:**

This data deliver shall be maintained electronically by the contractor.

**REMARKS:**

None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-10	RFP/Contract No. NNJ11393918R
Monthly Project Report			
1b. Data Type: 3			
4. Use: These products support the monthly management reviews of costs and technical performance.			5. DRD Category: <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: NFS 1852.234-1, Notice of Earned Value Management System NFS1852.234-2, Earned Value Management System			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

**SCOPE:** This DRD must be reconcilable to NF533 Cost and Data Reporting (DRD C2V2-08). The package supports the monthly management review of cost, technical performance, project performance and summary schedule. These review packages shall document the level of success in the execution of contract requirements and the status of the contractor's achievement against the performance standards contained within this statement of work, Management Plan (DRD C2V2-03) or elsewhere in this contract. Packages presented for program review, including insight into the contractor's, subcontractors', and vendors' overall technical, cost, project performance and status metrics and management responsiveness to the performance indicated by the metrics.

The Monthly Project Report will be presented by the contractor to NASA in place of the regularly scheduled weekly teleconference or incorporated into the Project Management Review package.

**CONTENT:** The presentations shall depict statuses, accomplishments, issues, corrective actions, earned value, matrices on burn-down lists, performance metrics, contract financial status including rates and other data necessary to demonstrate performance levels.

The package includes:

- Cost and Data Report (DRD C2V2-08)
- Earned Value Measurement Report in accordance with approved Management Plan (DRD C2V2-03)
- Integrated Master Schedule (DRD C2V2-04)
- Performance metrics as documented in the Management Plan (DRD C2V2-03)
- Significant accomplishments during the reporting period
- Status of customer acceptance of deliverables and completion of requirements
- Scope changes (including work performed out of scope) during the reporting period
- Issues/risks in accordance with Management Plan (DRD C2V2-03)
- Risk mitigation actions during reporting period

Status and subsequent burn-down matrices (in applicable development phase):

- External dependencies
- Procurements
  - Long lead items
- Life Cycle Review (e.g. RIDs, actions, document updates, etc)
- Verifications
- Software build, integration & testing progress
- Support Test Equipment (STE)
  - Procurements
  - Software development (scripts)
  - Integration
- Procedures development

- Data products delivery
- Parts and process certifications

FORMAT: Specific format to be proposed by the contractor and agreed to by the NASA COTR.

DISTRIBUTION:

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
LO/ISS Resource Management Office  
OH/Performance Assessment

SUBMISSION:

- i. Initial: Contract award + 30 days within 10 working days of the contractor's accounting month end, via EDMS workflow.
- ii. Frequency: Monthly, via EDMS workflow

MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

REMARKS: None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-11	RFP/Contract No. NNJ11393918R
Program Management Review (PMR) Package			
1b. Data Type: 3			
4. Use: These packages support the management and technical review of costs, schedule, and technical performance.			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References:			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

**SCOPE:** These data packages provide the quarterly integrated management review of the cost, schedule, and technical performance with a focus on the technical aspect. This face-to-face meeting will be a more detailed review of the areas from the Monthly Project Report identified as requiring additional review. The data provided per the requirements of this DRD should reconcile with the data provided per the requirements of NF533 (DRD C2V2-08).

#### CONTENT:

The PMR package shall include:

- Status of fiscal year project cost (budget and actuals/forecast), staffing (plan and actuals/forecast), management reserve, undistributed budget, risks and opportunities, schedule, and technical performance. Budget and forecast trace (shall be provided for all WBS's by subsystem level). Cumulative variance explanations (to fiscal year plan) and End-Of-Year trend variance explanations.
- Summary status: Including the high-level schedule, project summary status, and DIL status.
- Detailed status: Including a detailed integrated master schedule review of the baselined work plan, work accomplished vs. planned, work not completed or delayed, work to be completed in the next 90 days, status of external dependencies, schedule margin status, and monthly project report metrics status.
- Special topics and splinter sessions as identified 2 weeks in advance of the scheduled PMR by Contractor, NASA Contracting Officer, and NASA Contracting Officer Technical Representative.

**FORMAT:** A face-to-face meeting including detailed discussions of project status, resources, and special topics. Formatting is at the contractor's discretion.

#### DISTRIBUTION:

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
LO/Resource Analyst

#### SUBMISSION:

- Initial: Contract award + 90 days, via EDMS workflow one day after to the review
- Frequency: Quarterly, via EDMS workflow one day after to the review, One hard copy at the review for each NASA attendee (typically six attendees).

**MAINTENANCE:** Revisions shall be incorporated by change page or complete reissue.

1a. DRD Title	2. Date of current version	3. DRL Line Item No.	RFP/Contract No.
Contractor Specifications and Interface Documents		C2V2-12	NNJ11393918R
1b. Data Type: 1			
4. Use:  To document the functional, performance, physical, safety and environmental requirements of the system, subsystems and end items.			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: SSP 41170, Configuration Management Requirements SSP 50010, Standards for ISS Program Documentation SSP 41171, Preparation of Program-Unique Specifications SSP 30459, ISS Interface Control Plan SSP 41174, ISS Interface Control Working Group Operating Procedures			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

**SCOPE:** The contractor shall develop specifications in accordance with SSP 41170, SSP 50010, and SSP 41171. The Contract shall develop the specification(s) that contains the performance (hardware and software), functional, operational, environmental, interface, criticality, maintainability, safety, human rating other quality attributes, quality assurance requirements and implementation constraints to enable review and approval prior to detailed design and production. The specifications also serve as the record for changes that may be made for a variety of reasons throughout the project and continues into the operations phase. Software requirements are derived from the system specifications and required system interfaces. The specifications are the formal agreement between the Contractor and NASA on the requirements for each deliverable item.

The contractor shall develop a VV-C2V2 Interface Definition Document that contains the applicable information documented in Section 9 of SSP 41174, ISS Interface Control Working Group Operating Procedures.

As a minimum, the Contractor shall deliver the following specifications:

- A specification for each flight unit deliverable item type with traceability to the ISS C2V2 PIDS and associated system level interface control documents
- A specification for each flight software deliverable item type with traceability to the ISS C2V2 PIDS and associated system level interface control documents
- Ground Support Equipment specifications
- A VV interface definition document for the VV-C2V2 deliverable item with traceability to the ISS C2V2 PIDS and associated system level interface control documents

#### CONTENT:

The specifications shall define the minimum technical requirements and any constraints for the flight products that apply to performance, design, operation, interoperability, reliability, maintainability and transportability as defined in SSP 41171. The higher level specifications are the source of requirements used to develop the detailed design requirements that will be contained in the lower level specifications. The lower level specifications contain the performance, functional, environmental, interface, maintainability, and reliability and safety requirements for a configuration item (CI).

The Software Requirements Specification shall be prepared in accordance with SSP 41171. A software specification is a document which defines and records the software requirements which includes the detailed functional, performance, other quality attributes, interface requirements, quality assurance requirements and implementation constraints to be met by a computer software configuration item (CSCI). This document specifies the requirements for a CSCI and the methods to be used to ensure that each requirement has been met. This document forms the basis for design and qualification testing of a CSCI.

For all specifications, the Contractor shall trace the higher level specification requirements down to the down to

the configuration item (hardware or software). This traceability shall be included as an appendix to the specification.

**FORMAT:**

All specifications shall be delivered in MS Word format.

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

**SUBMISSION:**

Specification(s) are to be submitted, reviewed and baselined in accordance with the Hardware and Software Life Cycle Reviews (DRD C2V2-13).

**DISTRIBUTION:**

BG/Contracting Officer  
OD/Contracting Officer's Technical Representative  
1 e-copy to Program Repository via EDMS workflow

**MAINTENANCE:**

The specification(s) are updated as required during the requirements definition phase and following design, qualification, and production phases. The final version is to be updated as a result of the review and signatures obtained from all designated signatures.

**REMARKS:**

None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-13	RFP/Contract No. NNJ11393918R
Hardware and Software Life Cycle Reviews			
1b. Data Type: 2			
4. Use: To define the requirements for the life cycle reviews to ensure adequate planning, design and analysis before development, manufacture, and assembly of hardware and software			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: SSP 50287, Hardware/Software Acceptance Process NPR 7120.5, NASA Space Flight Program and Project Management Requirements NPR 7123.1A, NASA Systems Engineering Processes and Requirements NPR 7150.2A, NASA Software Engineering Requirements			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:**

The Contractor shall conduct the milestones reviews specified in the SOW.

Each review board shall contain at least the following voting board membership:

- NASA Contracting Officer Technical Representative
- NASA ISS C2V2 Subsystem Management Representative
- NASA Safety and Mission Assurance Representative
- NASA Quality Assurance Representative

The document review period shall be at least two weeks.

NASA-JSC shall have the opportunity to submit action and review items on any issues identified during any of the milestone reviews. The Contractor shall provide NASA-JSC access to all action and review items, their closure plan, and the closure product. The review board must concur on all action and review item closures and on successful completion of the review.

The Contractor shall develop review data packages consisting of but not limited to the following as appropriate with the life cycle:

- (1) Specifications with parent-child requirement traceability
- (2) Software requirements, such as the Software Design Document (SDD)
- (3) Interface Control Documents (ICDs) including software functional characteristics
- (4) Integrated Master Schedule
- (5) Documentation Tree
- (6) Management Plan
- (7) Contractor unique Workmanship Specifications
- (8) Memorandum of Agreements (MOAs) with NASA Directorates, if applicable
- (9) Configuration Management Plan
- (10) Software Development Plan
- (11) NPR 7150.2 A Compliance Matrix
- (12) VV-C2V2 Interface Definition Document (IDD)
- (13) Performance analysis such as Link/RF, Latency, EME, RFI, and Timing analysis
- (14) Thermal analysis
- (15) Stress analysis
- (16) FMEA/CIL

- (17) EEE Part analysis that includes but is not limited to the EEE parts list, derating analysis, NSPARs analysis, and radiation analysis
- (18) Reliability analysis
- (19) Safety/Hazard analysis including software hazards
- (20) Materials analysis
- (21) Human Factors analysis (IVA & EVA)
- (22) Verification Plan including software.
- (23) Software products including, but not limited to, the Software Test Description (STD) and Software Test Plan (STP)
- (24) Engineering Drawings
- (25) Computer Based control System (CBCS) Compliance Matrix
- (26) Software Requirements Specification
- (27) Qualification Plan & Acceptance Plan
- (28) Sustaining Engineering Plan
- (29) User's Manual for each hardware and software deliverable

The review data packages shall consist of engineering and technical data in accordance with NPR 7120.5, NPR 7123.1A, and NPR 7150.2A.

The Contractor shall prepare review presentation as specified. The presentation should include, at a minimum, the following:

- a. Identification of Board Members
- b. RID Process and schedule
- c. Project Overview and Technical Approach
- d. Contractor Team Structure & Key Personnel
- e. System & Interface Descriptions
- f. Identification of deliverables and resources
- g. Identification of facilities
- h. Identification of ICDs
- i. Prototyping or Engineering Unit Activities, if applicable
- j. Hardware requirements and design (level of detail and content in line with the type of review)
- k. Software requirements and design (level of detail and content in line with the type of review)
- l. Test Plan and Design Verification Plan (level of detail and content in line with the type of review)
- m. Risk assessment with risk mitigation
- n. External dependencies
- o. Project schedule and status



The milestone reviews are defined as follows:

Requirements Review (RR)	The RR examines the functional and performance requirements defined for the deliverables and ensures that the requirements and the specified concept of operations will satisfy the mission
Preliminary Design Review (PDR)	The PDR demonstrates that the preliminary design meets all system requirements with acceptable risk and within the cost and schedule constraints and establishes the basis for proceeding with detailed design. It shows that the correct design option has been selected, interfaces have been identified, and verification methods have been described. Full baseline cost and schedules, as well as risk assessments, management systems, and metrics are presented.
Critical Design Review (CDR)	The CDR demonstrates that the maturity of the design is appropriate to support proceeding with full scale fabrication, assembly, integration, and test, and that the technical effort is on track to complete the flight and ground system development and mission operations in order to meet mission performance requirements within the identified cost and schedule constraints. Progress against management plans, budget, and schedule, as well as risk assessments are presented.
Acceptance Review (AR)	The AR verifies the completeness of the specific end item with respect to the expected maturity level and to assess compliance to stakeholder expectations. The AR examines the system, its end items and documentation, and test data and analyses that support verification. It also ensures that the system has sufficient technical maturity to authorize its shipment to the designated operational facility or launch site.

**CONTENT:**

Listed above.

**FORMAT:**

Compatible with Microsoft Office products or negotiate with NASA-JSC COTR

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

**SUBMISSION:**

The review data packages shall be submitted no later one week prior to the review via EDMS workflow. Hardcopies of the review presentation shall be available at the review sufficient for number of review attendees.

**MAINTENANCE:**

No required maintenance. Packages may require update if a delta review is deemed necessary.

**REMARKS:**

None.

1a. DRD Title Integration Products	2. Date of current version	3. DRL Line Item No. C2V2-14	RFP/Contract No. NNJ11393918R
1b. Data Type: 3			
4. Use: To provide inputs and data products necessary to ensure successful integration with the ISS			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References:			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

#### SCOPE:

The Contractor shall deliver inputs to interfacing teams to ensure interfacing elements are compatible. The interfacing teams include but are not limited to the following:

1. ISS Flight Software Teams
2. ISS Mission Operations Teams
3. Extravehicular Activity (EVA) Teams
4. ISS Vehicle Teams
5. ISS Program Teams
6. ISS Safety and Missions Assurance (S&MA) Teams
7. Visiting Vehicle (VV) Teams

Each of these teams is responsible for delivering products that interface to the C2V2 products being developed under this Contract.

The Contractor shall support quarterly technical interchange meetings (TIMs) at NASA-JSC to address integration topics agreed to by the Contractor and the Contracting Officer's Technical Representative one week in advance of the meeting. The meetings shall take place during nominal work hours over no more than four consecutive working days.

#### CONTENT:

Integration products required:

- Review of and inputs to the following documents:
  - Interfacing assembly specifications (qty. 2)
  - System level requirements and interface documents (qty. 6)
  - Flight software design and interface documents (qty. 4)
  - Data integration documents and products (qty. 2)
  - Interfacing assembly drawing packages (qty. TBD assemblies 10-25)
  - Vehicle modification kit drawing packages (qty. TBD kits 2-4)
  - Intravehicular activity installation procedures (qty. 1 set)
  - Extravehicular activity installation procedures (qty. 1 set)
  - Troubleshooting procedures (qty. 2 sets)
  - Visiting vehicle C2V2 interface drawing packages (qty 2 sets)
  - Communication security documents (qty. 2)
  - System level coverage and link analyses (qty. 2)
  - NTIA application for frequency authorization (qty. 1)
- Attendance at and inputs to the following reviews and meetings at either NASA-JSC, NASA-MSFC, or via teleconference:
  - Interfacing assemblies requirements review (qty. 2)
  - Interfacing assemblies preliminary design review (qty. 2)
  - Interfacing assemblies critical design review (qty. 2)
  - System level design reviews (qty 2)
  - System level integration and operations reviews (2 per year)
  - Flight software integration technical meetings (bi-weekly)

- Flight software reviews (qty. 3)
  - Visiting vehicle integration technical interchange meetings (quarterly)
- Models of the C2V2 design including thermal, power, and structural models for each C2V2 orbital replaceable unit type at each design phase
- Integrated test support (Note: This does not include tests that may be performed at NASA facilities for certification of the C2V2 design for Government acceptance.):
  - Fit check and crew activity evaluation at NASA-JSC – qty. 2
  - Fit check and crew activity evaluation at NASA-MSFC – qty. 1
  - Integrated test at VV facility – qty. 4 (2 per VV)
  - Integrated test in ISS Software Development and Integration Laboratory – qty. 2
- Technical inputs via teleconferences and e-mail to the following teams: (Note: NASA will schedule a monthly meeting to address technical matters with these teams, as required.)
  - Integrated thermal analysis team
  - Integrated radiation environments analysis team
  - Integrated structures analysis team
  - Integrated electromagnetic effects team
  - Integrated safety analysis team
  - Integrated power analysis team
  - Integrated coverage and link analysis and spectrum management team
  - EEE parts team
  - Materials and processes team
  - Quality assurance team
  - Human factors team
  - Command and data handling team
  - Joint vehicle operations team
  - Robotic operations team
  - Visiting vehicle integration teams
  - Space Station Training Facility team
  - Flight operations team
  - Flight software team

**FORMAT:**

Electronic mail or MS Word document with attachments that consist of all integration products provided the prior week. Integration products may include electronic mail exchanges with integrating team members, MS Word documents, action item responses, review item responses, minutes of a meeting or teleconference, test trip report, etc.

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
 Other: BG/Contracting Officer  
         EV/C2V2 Subsystem Manager  
         EV/C2V2 Chief Engineer

**SUBMISSION:**

- i. Initial: 3 weeks from contract start via EDMS workflow.
- ii. Frequency: Weekly.

**MAINTENANCE:** None.

**REMARKS:** None

1a. DRD Title  Engineering Flight Drawings, Models, and Associated Lists	2. Date of current version	3. DRL Line Item No. C2V2-15	RFP/Contract No. NNJ11393918R
1b. Data Type: 3			
4. Use:  To provide the design data used to analyze, manufacture, install, verify, operate, modify, and maintain the products delivered under this contract			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: ASME Y14.100-2000, Engineering Drawing Practices ASME Y14.35M-1997, Revisions of Engineering Drawings and Associated Documents ASME Y14.24-1999, Types and Applications of Engineering Drawings ASME Y14.41-2003, Digital Product Definition Data Practices IEEE/ASTM SI 10-2002, American National Standard for Use of the International System of Units (SI): The Modern Metric System			7. Interrelationships:

8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

SCOPE:

This DRD establishes the requirements for content, format, control, and maintenance of drawings and associated model files prepared by the contractor and/or obtained from subcontractors or vendors for all products designed under this contract.

CONTENT:

The Contractor shall deliver all drawings for all deliverables except the engineering units. Drawings shall be prepared in accordance with ASME Y14.100-2000, Engineering Drawing Practices. All drawings shall be submitted to NASA in electronic format with native model files. The contractor shall have the ability to submit and receive CAD generated engineering drawings including solid models, electrical/electronic schematics, software code, and printed circuit board layouts. The contractor shall understand and participate as required in the review process that NASA follows in order to approve flight product drawings, considered a part of the Engineering Drawings delivery. All drawing native files defining the as built configuration shall be submitted with the flight products for acceptance by NASA and approval of the DD250.

FORMAT:

Delivery to NASA of drawings or models and associated lists will be made electronically. All drawings or models and associated lists, except for "A" size book form drawings, shall be delivered bundled into .zip or .tar files. "A" size book form drawings may be delivered in an electronic format other than raster image as mutually agreed to by the NASA. Models shall be delivered in PDF format. Drawings and associated lists shall be delivered in PDF, ASCII, HPGL MS Excel or Raster Image format provided the following criteria are met:

- (a) Engineering flight drawings shall be in accordance with the intent of ASME Y14.100-2000. Models shall be in accordance with the intent of ASME Y14.41-2003.
- (b) All design activities shall use the methods designated in IEEE/ASTM SI 10-2002 to convert dimensional units from one system (SI or English) to another.
- (c) All design activities shall use the U.S. convention on third-angle projection in depicting views on drawings. A model coordinate system shall be depicted by three mutually perpendicular line segments with its origin located at the intersection of the three axes.
- (d) Where design activity material or process specification numbers are called out, the equivalent Government or industry specification numbers shall accompany them wherever a Government or industry specification is applicable.

- (e) Engineering parts list, bill of materials, and note format shall be consistent with ASME Y14.100 and delivered in ASCII format, Raster Image or MS Excel format with each drawing.
- (f) Electronic formats shall provide for magnetic, optical media or electronic transmission exchanges.

Delivery of drawings or models and associated list files will be electronic.

Drawing deliveries will be in one of the following: Raster image format, PDF or HPGL file. Model deliveries will be in PDF.

Other associated lists shall be delivered in one of the following: ASCII text files, PDF, MS Excel format, or Raster image format.

When a contractor standard or process is referenced that is not available at NASA-JSC, the full standard or process shall be provided as part of the drawing package. Off-the-shelf products shall be identified by the vendor's part number, cage code (if available) and manufacturer's name and address. The parts list shall be submitted electronically in native form that is compatible with Microsoft Excel. Design Change Notices shall be submitted in native form compatible Microsoft Word.

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

**SUBMISSION:**

Drawing(s) are to be submitted, reviewed and baselined in accordance with the Hardware and Software Life Cycle Reviews (DRD C2V2-13) via EDMS workflow.

**MAINTENANCE:**

Updates are required for any changes.

**REMARKS:**

None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-16	RFP/Contract No. NNJ11393918R
Qualification and Acceptance Plans and Procedures			
1b. Data Type: Plans – Type 1 Procedures – Type 2			
4. Use: To define and document the qualification and acceptance plans and procedures used to qualify and accept the flight design and flight deliverables, respectively.			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References:			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

##### SCOPE:

The contractor shall deliver the following qualification and acceptance products:

- Qualification Plan
- Acceptance Plan
- Qualification Procedures
- Acceptance Procedures

The Qualification Plan documents the approach to qualifying the flight design. The Acceptance Plan document the approach to verifying the flight hardware. Both describe in detail how the processes of testing, analysis, demonstration and inspection shall be used to certify that contracted requirements have been met.

The qualification and acceptance procedures document the detailed procedures used to test qualification and flight products.

##### CONTENT:

The Qualification Plan defines how the flight hardware is qualified to meet the design requirements. Analysis, Test, Inspection, Demonstration, a combination of methods, or other agreed to methods may be used. The Qualification Plan addresses those engineering design aspects that need to be verified on the first delivery only in order to verify that a requirement has been met, typically performed on dedicated qualification unit.

The Qualification Plan will also document the methodology of hardware integration within the C2V2 system and with the systems external to C2V2. The outcome of this activity is captured in the FCA/PCA (DRD C2V2-18)

The Acceptance Plan defines how each flight deliverable is verified to meet the functional and performance requirement. Analysis, Test, Inspection, Demonstration, a combination of methods, or other agreed to methods may be used. The outcome of this activity is captured in the Acceptance Data Package (DRD C2V2-20).

The procedures shall contain the following:

1. Identification of the specific end item or flight hardware being tested
2. Detail description of the test objective
3. Description of all relevant test equipment and facility used
4. Full set of procedures
5. Criteria for passing or failing the test
6. Specification of the tolerances on all operational parameters with go, no-go criteria
7. Initial Settings for all Controls, Power Supply Voltages, etc.
8. Safety hardware that is mandatory to be verified as operational prior to testing, with reference to the procedures used.

**FORMAT:**

Compatible with Microsoft Office Word.

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative

Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager

**SUBMISSION:**

The plans and procedures are submitted, reviewed and baselined in accordance with the Hardware and Software Life Cycle Reviews (DRD C2V2-13). Submit via EDMS workflow.

**MAINTENANCE:**

Plans and procedures must be maintained to reflect the intended qualification and acceptance test plans and procedures.

**REMARKS:** None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-17	RFP/Contract No. NNJ11393918R
Verification Plan			
1b. Data Type: 1			
4. Use: This plan defines the approach to verifying and validating that the flight products met the design requirements			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: SSP 50010, Standards for ISS Program Documentation NPR 7120.5D, NASA Space Flight Program and Project Management Requirements NPR 7150.2, NASA Software Engineering Requirements			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

#### SCOPE:

This plan defines the verification activities planned to confirm that the flight products comply with their specifications, function properly in the complete integrated environment with other actual flight hardware, and are ready for use for a space and human rated environment.

#### CONTENT:

The contractor shall produce this plan tailored to the type and scale of work described in the contract. The plan addresses how the requirements in the Contractor Specifications and Interface Documents (C2V2-13) are to be completely verified by the Contractor, at a minimum, identifying the verification method, pass/fail criteria, any required or specialized equipment, constraints or test environment, and hardware/software fidelity being used for the verification. The identification of qualification test and acceptance test plans is to be included in this plan.

#### FORMAT:

The format may be varied to match the specific nature of the products being provided. The specification shall be delivered in native format and be compatible with JSC standard software loads.

#### DISTRIBUTION:

OPR: OD/Contracting Officer's Technical Representative

Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer  
EV/C2V2 Verification Lead Engineer

#### SUBMISSION:

The submission of the verification plan is to be submitted, reviewed and baselined in accordance with the Hardware and Software Life Cycle Reviews (DRD C2V2-13) via EDMS workflow.

#### MAINTENANCE:

After CDR, changes to the verification approach require approval of the appropriate NASA configuration change board.

REMARKS: None



1a. DRD Title  Functional Configuration Audit and Physical Configuration Audit (FCA/PCA) Package and Certification Data Package (CDP)	2. Date of current version	3. DRL Line Item No. C2V2-18	RFP/Contract No.  NNJ11393918R
1b. Data Type: 1			
4. Use:  To define the process and products that will be utilized to accept hardware and software that is verified to be complete, compliant with requirements, properly documented and ready for safe and successful integration and operation. To provide objective evidence that the flight product meets requirements.			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: SSP 50287, Hardware/Software Acceptance Process			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

SCOPE: The Contractor shall provide a data package that (1) verifies that the flight units, including the qualification unit(s), meets specified safety, performance and functional requirements within specified environments and constraints and (2) establishes the acceptance units are built in the configuration of the qualified design and successfully tested in accordance with validated acceptance test requirements and procedures.

#### CONTENT:

Certification report summary and supporting documentation

- \*Specifications
- Verification report (including verification matrix mapped to verification data or verification closure documentation)
- Test preparation sheets or procedures, test reports and exceptions
- Analysis reports and memorandums
- Fabrication and inspection records with configuration verification
- Demonstration results or reports
- Qualification Report and supporting data
  - Engineering Analysis Reports: Stress, thermal, EEE Parts Stress/De-rating, structural, off-gassing, flammability, toxicological, others specific to the product
  - Qualification Test Reports
  - Manufacturer's Data used for a verification of hazard control
  - Materials Certification
  - Fracture Control Report and Materials Usage Agreement
- List of Approved Operational Controls
- Structural Integrity Verification Plan
- Acceptance Report for qualification unit
- \*Engineering Drawings and associated lists
- Software Test Report
- \*Software VDD
- \*Acceptance Data Package for the first flight set
- Certification configurations
- \*FMEA and Hazard analysis with Verification Tracking Log (VTL), if applicable
- EEE parts list
- Discrepancy Reports and Problem Closure Reports Relevant to Certification
- Waivers, deviations, NCRs
- List of shortages, unincorporated design changes and open work
- Limited Life items and Preventive Maintenance plan
  - Identify any limited life items and preventive maintenance items and/or perform reassessments as needed to reflect technical findings.

- Identify ground rules and assumptions used in making predictions and performing analyses.  
Provide rationale for items assessed for preventive maintenance.
- User's Guide; Hardware and Software
- Completed DD250s
- Completed JF1149s, as required

**FORMAT:**

Compatible with Microsoft Office products or applicable DRD requirements.

**DISTRIBUTION:**

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
OH/Configuration Management Representative  
OE/NE/Quality Assurance Representative

**SUBMISSION:**

This package shall be completed for and baselined at acceptance review. Submitted via EDMS workflow.

**MAINTENANCE:**

Updated if certification documentation changes post-acceptance.

**REMARKS:**

None.

1a. DRD Title  Software Version Description Document (VDD)	2. Date of current version	3. DRL Line Item No. C2V2-19	RFP/Contract No. NNJ11393918R
1b. Data Type: 3			
4. Use: To identify and describe a software version consisting of one or more CSCIs (including any open source software). The description is used to release, track, and control software versions.			5. DRD Category: <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References: NPR 7150.2 NASA Software Engineering Requirements			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

#### SCOPE:

The Software Version Description Document identifies and describes a software version consisting of one or more computer software configuration items (CSCIs) (including any open source software). The VDD is used to release, track, and control software versions.

#### CONTENT:

In accordance with NPR 7150.2 NASA Software Engineering Requirements, the Software Version Description Document shall identify and provide:

- a. Full identification of the system and software (i.e., numbers, titles, abbreviations, version numbers, and release numbers).
- b. Executable software (i.e., batch files, command files, data files, or other software needed to install the software on its target computer).
- c. Software life cycle data that defines the software product.
- d. Archive and release data.
- e. Instructions for building the executable software including, for example, the instructions and data for compiling and linking and the procedures used for software recovery, software regeneration, testing, or modification.
- f. Data integrity checks for the executable, object code, and source code.
- g. Software product files (any files needed to install, build, operate, and maintain the software).

#### FORMAT:

Electronic submission of data deliverables is required. Electronic deliverables shall be printable where possible. The format may be varied to match the specific nature of the products being provided. The electronic data shall be delivered in native format and be compatible with standard JSC office software loads.

#### DISTRIBUTION:

OPR: OD/Contracting Officer's Technical Representative  
Other: BG/Contracting Officer  
EV/C2V2 Subsystem Manager

#### DISTRIBUTION:

BG/Contracting Officer  
OD/Contracting Officer's Technical Representative  
1 e-copy to Program Repository via EDMS workflow

**SUBMISSION:**

Delivered with each software delivery to the MBF and to the EDMS workflow.

**MAINTENANCE:**

None

**REMARKS:**

None

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-20	RFP/Contract No.
Acceptance Data Package (ADP)			NNJ11393918R
1b. Data Type: 2			
4. Use:  The ADP provides a complete and verified status, including the as-built configuration, of hardware or software, contains information pertinent to acceptance			5. DRD Category:  <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA
6. References: SSP 30695, Acceptance Data Package Requirements Specification NASA FAR Sup 1852.246-72			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:** The Acceptance Data Package (ADP) is an accumulation of documentation that provides a verified, complete, and current status of deliverable hardware needed by the procuring and using organization to enable the continuation of required activities. It provides documentation of the "as-built" configuration.

**CONTENT:** The ADP contents shall be as specified by SSP 30695.

**FORMAT:** The data element format shall be as specified in SSP 30695.

**DISTRIBUTION:**

OPR: OE/NE/Quality Assurance Representative  
Other: OD/Contracting Officer's Technical Representative  
OE/NE/Safety and Mission Assurance Representative  
BG/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

**SUBMISSION:**

- ii. Initial: Submitted with shipment or transfer of hardware or software delivery in hardcopy and via EDMS workflow.
- iii. Frequency of Submission: Required with each delivery of hardware from a manufacturer and, or developer to a using site or deliveries between using sites in hardcopy and via EDMS workflow.

**MAINTENANCE:**

Maintenance of the ADP is specified in SSP 30695.

**REMARKS:**

None.

1a. DRD Title	2. Date of current version	3. DRL Line Item No. C2V2-21	RFP/Contract No. NNJ11393918R
Quality Plan			
1b. Data Type: 1			
4. Use: To describe the contractor's approach to quality planning and reporting			5. DRD Category: <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA
6. References: ANSI-ISO/ASQ Q9001-2008 Quality Management Systems - Requirements			7. Interrelationships:

**8. PREPARATION INFORMATION:**

The contractor shall prepare the data delivery as follows:

**SCOPE:**

The Contractor shall submit a quality plan that defines how the contractor will conform to the requirements of ANSI-ISO/ASQ Q9001-2008 and SSP 41173.

The Quality Plan shall be approved by the Contractor's key personnel representing quality assurance. After approval, the Quality Plan will become part of the contract.

**CONTENT:**

The Contractor shall submit a quality plan that defines how the contractor will conform to the requirements of ANSI-ISO/ASQ Q9001-2008 and SSP 41173.

**FORMAT:**

MSWord or compatible format. Electronic.

**DISTRIBUTION:**

OPR: OE/NE/Quality Assurance Representative  
Other: OD/Contracting Officer's Technical Representative  
BA/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

**SUBMISSION:**

- i. Initial: Due with proposal (per instructions in section L).
- ii. Final: Contract award + 30 days, via EDMS workflow
- iii. Approval: Contract start + 60 days, via EDMS workflow
- iv. Frequency: Annual, via EDMS workflow

**MAINTENANCE:**

The Quality Plan shall be periodically reviewed and updated as needed and submitted via EDMS to distribution.

**REMARKS:**

NASA will be reviewing the quality plan for the following:

- 1. A list of the Contractor's current procedures that support the ANSI-ISO/ASQ Q9001-2008 elements.
- 2. How the Contractor will ensure timely review of technical documents that affect quality and changes thereto.
- 3. The process for including NASA in the review of purchasing documents for delegation determination.

4. How the Contractor will ensure that quality requirements are implemented and satisfied throughout all phases of contract performance, including preliminary and engineering design, development, fabrication, assembly, inspection, qualification, certification, acceptance, checkout, and delivery.
5. How the Contractor will monitor, measure, and control the quality of products produced by the contractor and subcontractors.
6. How the Contractor will ensure that products, which do not conform to product requirements, are identified and controlled to prevent their unintended use or delivery.
7. The methodology for inspection and test planning (economical and effective use of personnel, facilities and equipment).
8. The methodology/criteria for assigning itinerate or resident quality assurance personnel at subcontractor or supplier facilities.
9. How the Contractor will establish and implement the inspection or other activities necessary for ensuring that purchased product meets specified purchase requirements.
10. How the Contractor will verify that all personnel performing work affecting product quality are competent as a result of appropriate education, training, skills, and experience. In addition explain the system that will be used to monitor and maintain this level of personnel competency required during the duration of the contract.
11. The responsibilities and requirements for planning and conducting audits (internal and external) and surveillance, and for reporting results and maintaining records.
12. How the Contractor will involve the Government quality representative in disposition of non-conformances except scrap.
13. How the Contractor will be involved in waivers and deviations when quality assurance is affected.
14. The methods for measuring the achievement of the quality objectives.
15. The processes that will be implemented to report problems, corrective actions, and resolution verification to the designated NASA Quality Organization.
16. The S&MA organization chart depicting functional titles and communication paths to the JSC S&MA representatives.
17. The process for determining appropriate quality indices and measurements and reporting those to designated Quality organization in a timely fashion.
18. The method for maintaining a register of approved suppliers that include the scope of the approval. Explain the method of reviewing supplier performance.
19. The process for configuration management of documents (including manufacturing documents such as travelers / routers / work authorization documents) and drawings.
20. The process for EEE components selection, approval, evaluation, procurement, and control.
21. The process for handling, storage, preservation, packaging, and shipping of product.
22. The process for using and controlling Off-the-Shelf (OTS) products including supplier selection and evaluation.

1a. DRD Title Safety Analysis and Hazard Reports	2. Date of current version	3. DRL Line Item No. C2V2-22	RFP/Contract No.  NNJ11393918R
1b. Data Type: 1			
4. Use:  The ISS Safety Review Panel (SRP) will use the Safety Analysis and Hazard Reports to assess the ground and flight safety.			5. DRD Category:  <input type="checkbox"/> Technical  <input type="checkbox"/> Administrative  <input checked="" type="checkbox"/> SR&QA
6. References: SSP 30309 Safety Analysis and Risk Assessment Requirements Document SSP 30599 Safety Review Process			7. Interrelationships:

#### 8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

**SCOPE:** The Contractor shall perform safety and hazard analyses in accordance with SSP 30309 for all flight deliverables and ground support equipment as required. Safety analysis and hazard reports shall be submitted in accordance with the process defined in SSP 30599.

**CONTENT:** Safety analysis and hazard reports shall be provided that are commensurate with the level of maturity of the design in accordance with SSP 30309 and SSP 30599. The content shall be as defined in SSP 30309 and SSP 30599.

#### FORMAT:

These deliverables shall be in the format described in SSP 30309 and SSP 30599. MS Word or compatible format, electronically.

#### DISTRIBUTION:

OPR: OE/NE/Safety and Mission Assurance Representative  
Other: OD/Contracting Officer's Technical Representative  
BA/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

#### SUBMISSION:

Submission through the safety review process shall be in accordance with SSP 30599.

#### MAINTENANCE:

The document shall be maintained in accordance with SSP30599.

#### REMARKS:

None



1a. DRD Title  Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL)	2. Date of current version	3. DRL Line Item No. C2V2-23	RFP/Contract No. NNJ11393918R
1b. Data Type: 1			
4. Use:  The FMEA serves as a source that documents the systematic evaluation of credible failure modes and effects to hardware functionality, system performance, and personnel and crew.			5. DRD Category:  <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA
6. References: SSP 30234 Failure Modes and Effects Analysis and Critical Items List Requirements for Space Station			7. Interrelationships:

8. PREPARATION INFORMATION:

The contractor shall prepare the data delivery as follows:

**SCOPE:** The Contractor shall deliver the FMEA and CIL for each type of flight and GSE deliverable in accordance with SSP 30234. The Contractor responsibilities are as described in SSP 30234, Section 3.2.2.3. Each credible failure mode is assessed in order that appropriate corrective action(s) may be taken to eliminate or control the root cause of the failure. The CIL documents reliability risk item's that meet criteria of SSP 30234, Paragraph 6.1. These items require additional disposition to communicate risk from failure and request program acceptance of its use.

**CONTENT:** The FMEA and CIL contents are specified by SSP 30234

**FORMAT:** The data element format is specified in SSP 30234. The reports shall be delivered electronically in MS Word format.

**DISTRIBUTION:**

OPR: OE/NE/Safety and Mission Assurance Representative  
-Other: OD/Contracting Officer's Technical Representative  
BA/Contracting Officer  
EV/C2V2 Subsystem Manager  
EV/C2V2 Chief Engineer

**SUBMISSION:**

FMEA/CIL Report: FMEA/CIL worksheets: Submitted in accordance with the SSP 30234 via EDMS workflow.  
Critical Items: Submitted in accordance with SSP 30234 via EDMS workflow.

**MAINTENANCE:** Maintained in accordance with SSP 30234.

**REMARKS:** None

## SECTION K: REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

### K.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

FAR 52.209-2 Prohibition on Contracting with Inverted Domestic Corporations – Representations (MAY 2011)

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

None incorporated by reference

### K.2 FAR 52.204-8 Annual Representations and Certifications (JAN 2011)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 336419.

(2) The small business size standard is 1000.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the Offeror is currently registered in CCR, and has completed the ORCA electronically, the Offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The Offeror shall indicate which option applies by checking one of the following boxes:

☐ (i) Paragraph (d) applies.

☐ (ii) Paragraph (d) does not apply and the Offeror has completed the individual representations and certifications in the solicitation.

(c)(1) The following representations or certifications in ORCA are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless--

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding

procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the clause at 52.204-7, Central Contractor Registration.

(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that--

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(v) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(vi) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(vii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(viii) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(ix) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.

(x) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.

(xi) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.

(xii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the

simplified acquisition threshold and the contract is not for acquisition of commercial items.

(xiii) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xiv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA-designated items.

(xv) 52.225-2, Buy American Act Certificate. This provision applies to solicitations containing the clause at 52.225-1.

(xvi) 52.225-4, Buy American Act--Free Trade Agreements--Israeli Trade Act Certificate. (Basic, Alternate I, and Alternate II) This provision applies to solicitations containing the clause at 52.225-3.

(A) If the acquisition value is less than \$25,000, the basic provision applies.

(B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.

(C) If the acquisition value is \$50,000 or more but is less than \$67,826, the provision with its Alternate II applies.

(xvii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xviii) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification. This provision applies to all solicitations.

(xix) 52.225-25, Prohibition on Engaging in Sanctioned Activities Relating to Iran-Certification. This provision applies to all solicitations.

(xx) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to--

(A) Solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions; and

(B) For DoD, NASA, and Coast Guard acquisitions, solicitations that contain the clause at 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns.

(2) The following certifications are applicable as indicated by the Contracting Officer:

(Contracting Officer check as appropriate.)

[ ](i) 52.219-22, Small Disadvantaged Business Status.

[ ](A) Basic.

☐ (B) Alternate I.

☐ (ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.

☐ (iii) 52.222-48, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment Certification.

☐ (iv) 52.222-52 Exemption from Application of the Service Contract Act to Contracts for Certain Services--Certification.

☐ (v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

☐ (vi) 52.223-13, Certification of Toxic Chemical Release Reporting.

☐ (vii) 52.227-6, Royalty Information.

☐ (A) Basic.

☐ (B) Alternate I.

☐ (viii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The Offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the Offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below (Offeror to insert changes, identifying change by clause number, title, date). These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

-----  
 --  
 FAR Clause      Title      Date      Change  
 -----  
 --

Any changes provided by the Offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)

**K.3      FAR 52.207-4 Economic Purchase Quantity – Supplies (AUG 1987)**

(a) Offerors are invited to state an opinion on whether the quantity(ies) of supplies on which bids, proposals or quotes are requested in this solicitation is (are) economically advantageous to the Government.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(b) Each Offeror who believes that acquisitions in different quantities would be more advantageous is invited to recommend an economic purchase quantity. If different quantities are recommended, a total and a unit price must be quoted for applicable items. An economic purchase quantity is that quantity at which a significant price break occurs. If there are significant price breaks at different quantity points, this information is desired as well.

**Offeror Recommendations**

Item	Quantity Quotation	Price	Total
_____	_____	_____	_____

(c) The information requested in this provision is being solicited to avoid acquisitions in disadvantageous quantities and to assist the Government in developing a data base for future acquisitions of these items. However, the Government reserves the right to amend or cancel the solicitation and resolicit with respect to any individual item in the event quotations received and the Government's requirements indicate that different quantities should be acquired.

(End of provision)

K.4 FAR 52.209-7 Information Regarding Responsibility Matters (JAN 2011)

(a) Definitions. As used in this provision--

"Administrative proceeding" means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

"Federal contracts and grants with total value greater than \$10,000,000" means--

(1) The total value of all current, active contracts and grants, including all priced options; and

(2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

"Principal" means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

(b) The Offeror [ ] has [ ] does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the Offeror checked "has" in paragraph (b) of this provision, the Offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the Offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the Offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

(i) In a criminal proceeding, a conviction.

(ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in--

(A) The payment of a monetary fine or penalty of \$5,000 or more; or

(B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the Offeror has been involved in the last five years in any of the occurrences listed in

(c)(1) of this provision, whether the Offeror has provided the requested information with regard to each occurrence.

(d) The Offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIIS as required through maintaining an active registration in the Central Contractor Registration database at <http://www.ccr.gov> (see 52.204-7).

"Principal" means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

(End of provision)

#### K.5 FAR 52.215-6 Place of Performance (OCT 1997)

(a) The Offeror or respondent, in the performance of any contract resulting from this solicitation, o intends, o does not intend [*check applicable block*] to use one or more plants or facilities located at a different address from the address of the Offeror or respondent as indicated in this proposal or response to request for information.

(b) If the Offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

Place of Performance (Street Address,  
City, State, County, ZIP Code)

Name and Address of Owner and Operator of the  
Plant or Facility if Other than Offeror or Respondent

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

(End of provision)

#### K.6 FAR 52.225-18 Place of Manufacture (SEP 2006)

(a) *Definitions.* As used in this clause—

"Manufactured end product" means any end product in Federal Supply Classes (FSC) 1000-9999, except—

- (1) FSC 5510, Lumber and Related Basic Wood Materials;
- (2) Federal Supply Group (FSG) 87, Agricultural Supplies;
- (3) FSG 88, Live Animals;
- (4) FSG 89, Food and Related Consumables;
- (5) FSC 9410, Crude Grades of Plant Materials;
- (6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;



- (8) FSC 9610, Ores;
- (9) FSC 9620, Minerals, Natural and Synthetic; and
- (10) FSC 9630, Additive Metal Materials.

“Place of manufacture” means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

(b) For statistical purposes only, the Offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly—

(1) ☐ In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or

(2) ☐ Outside the United States.

(End of provision)

#### K.7 FAR 52.230-1 Cost Accounting Standards Notices and Certification (OCT 2008)

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract. If the Offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

##### **I. Disclosure Statement—Cost Accounting Practices and Certification**

(a) Any contract in excess of \$650,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any Offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the Offeror’s proposal under this solicitation unless the Offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the Offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

☐ (1) *Certificate of Concurrent Submission of Disclosure Statement.* The Offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and

(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: \_\_\_\_\_

Name and Address of Cognizant ACO or Federal Official Where Filed:

\_\_\_\_\_  
The Offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

[ ] (2) *Certificate of Previously Submitted Disclosure Statement.* The Offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: \_\_\_\_\_

Name and Address of Cognizant ACO or Federal Official Where Filed:

\_\_\_\_\_  
The Offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

[ ] (3) *Certificate of Monetary Exemption.* The Offeror hereby certifies that the Offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling \$50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The Offeror further certifies that if such status changes before an award resulting from this proposal, the Offeror will advise the Contracting Officer immediately.

[ ] (4) *Certificate of Interim Exemption.* The Offeror hereby certifies that (i) the Offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the Offeror is not yet required to submit a Disclosure Statement. The Offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the Offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under paragraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contractor subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

## II. Cost Accounting Standards—Eligibility for Modified Contract Coverage

If the Offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the Offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

☐ The Offeror hereby claims an exemption from the Cost Accounting Standards clause under

the provisions of 48 CFR 9903.201-2(b) and certifies that the Offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the Offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. The Offeror further certifies that if such status changes before an award resulting from this proposal, the Offeror will advise the Contracting Officer immediately.

Caution: An Offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the Offeror has been awarded a single CAS-covered prime contractor subcontract of \$50 million or more.

### III. Additional Cost Accounting Standards Applicable to Existing Contracts

The offeror shall indicate below whether award of the contemplated contract would, in accordance with paragraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

☐ Yes                      ☐ No

(End of clause)

(End of Section)

## SECTION L: INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

### L.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

FAR 52.211-14 Notice of Priority Rating for National Defense, Emergency, Preparedness, and Energy Program Use (APR 2008)
FAR 52.214-34 Submission of Offers in the English Language (APR 1991)
FAR 52.214-35 Submission of Offers in U.S. Currency (APR 1991)
FAR 52.215-1 Instructions to Offerors - Competitive Acquisition (JAN 2004) – ALT I and II (October 1997)
FAR 52.215-16 Facilities Capital Cost of Money (JUN 2003)
FAR 52.215-22 Limitations on Pass-Through Charges--Identification of Subcontract Effort (OCT 2009)
FAR 52.219-24 Small Disadvantaged Business Participation Program-Targets (OCT 2000)
FAR 52.222-24 Pre-Award On-Site Equal Opportunity Compliance Evaluation (FEB 1999)

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

NFS 1852.227-84 Patent Rights Clauses (DEC 1989)
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### L.2 52.215-20 Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data (OCT 2010)

#### (a) Exceptions from certified cost or pricing data.

(1) In lieu of submitting certified cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following paragraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered.* If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) *Commercial item exception.* For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include—

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), *e.g.*, wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities;

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market;

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for certified cost or pricing data.* If the offeror is not granted an exception from the requirement to submit certified cost or pricing data, the following applies:

(1) The offeror shall prepare and submit certified cost or pricing data, data other than certified cost or pricing data, and supporting attachments in accordance with the instructions contained in [Table 15-2](#) of FAR [15.408](#), which is incorporated by reference with the same force and effect as though it were inserted here in full text. The instructions in [Table 15-2](#) are incorporated as a mandatory format to be used in this contract, unless the Contracting Officer and the Contractor agree to a different format and change this clause to use Alternate I.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR [15.406-2](#).

(End of provision)

### **L.3 FAR 52.216-1 Type of Contract (APR 1984)**

The Government contemplates award of a Cost-Plus-Incentive-Fee (CPIF) contract resulting from this solicitation.

(End of provision)

### **L.4 FAR 52.233-2 Service of Protest (SEP 2006)**

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as

follows) by obtaining written and dated acknowledgment of receipt from:

NASA Johnson Space Center  
Attn: Kirby L. Condrón/BG  
2101 NASA Parkway  
Houston, TX 77058

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

**L.5 FAR 52.252-1 Solicitation Provisions Incorporated by Reference (FEB 1998)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The Offeror is cautioned that the listed provisions may include blocks that must be completed by the Offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the Offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.acqnet.gov/far/>

NASA FAR Supplement (NFS) clauses:

<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

(End of provision)

**L.6 NFS 1852.215-77 Pre-proposal/Pre-bid Conference (DEC 1988)**

(a) A pre-proposal/pre-bid conference will be held as indicated below:

Date: *TBD*  
Time: *TBD*  
Location: Gilruth Center, Houston, TX 77058

(b) Attendance at the pre-proposal/pre-bid conference is recommended; however, attendance is neither required nor a prerequisite for proposal/bid submission and will not be considered in the evaluation.

(c) Offerors who plan to attend the pre-proposal conference must provide the Contracting Officer in writing, at a minimum, full name of the attendee(s), identification of nationality (U.S. or specify other nation citizenship), affiliation and full office address/phone number within five (5) working days of the conference. In some cases, a Center may require more specific identification information such as; driver's license and social security number. Center specific security requirements will be given to each company representative prior to the conference. The Government is not responsible for Offerors' inability to obtain clearance within sufficient time to attend the conference. Due to space limitations, representation of any

Offeror may not exceed two company representatives/persons per Offeror. Any “lobbying firm or lobbyist” as defined in 2 U.S.C. 1602(9) and (10), or any Offeror represented by a lobbyist under the Lobbying Disclosure Act of 1995 shall be specifically identified.

(d) Visitors on NASA Centers are allowed to possess and use photographic equipment (including camera cell phones) and related materials EXCEPT IN CONTROLLED AREAS. Anyone desiring to use camera equipment during the conference should contact the Contracting Officer to determine if the site(s) to be visited is a controlled area.

(e) The Government will respond to questions regarding this procurement provided such questions have been received at least seven (7) working days prior to the conference. Other questions will be answered at the conference or in writing at a later time. All questions, together with the Government’s response, will be transmitted to all solicitation recipients via the government-wide point of entry (GPE). In addition, conference materials distributed at the pre-proposal conference will be made available to all potential Offerors via the GPE using the NAIS Electronic Posting System.

(End of provision)

#### L.7 NFS 1852.233-70 Protests to NASA (OCT 2002)

Potential bidders or Offerors may submit a protest under 48 CFR Part 33 (FAR Part 33) directly to the Contracting Officer. As an alternative to the Contracting Officer's consideration of a protest, a potential bidder or Offeror may submit the protest to the Assistant Administrator for Procurement, who will serve as or designate the official responsible for conducting an independent review. Protests requesting an independent review shall be addressed to Assistant Administrator for Procurement, NASA Code H, Washington, DC 20546-0001.

(End of provision)

#### L.8 NFS 1852.234-1 Notice of Earned Value Management System (NOV 2006)

(a) The Offeror shall provide documentation that its proposed Earned Value Management System (EVMS) complies with the EVMS guidelines in the American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA)-748 Standard, Earned Value Management Systems.

(b) If the Offeror proposes to use a system that currently does not meet the requirements of paragraph (a) of this provision, the Offeror shall submit its comprehensive plan for compliance with the EVMS guidelines to the Government for approval.

(1) The plan shall—

- (i) Describe the EVMS the Offeror intends to use in performance of the contract;
- (ii) Distinguish between the Offeror's existing management system and modifications proposed to meet the EVMS guidelines in ANSI/EIA-748;
- (iii) Describe the management system and its application in terms of the EVMS guidelines;
- (iv) Describe the proposed procedure for application of the EVMS requirements to subcontractors;
- (v) Describe how the Offeror will ensure EVMS compliance for each subcontractor subject to the flowdown requirement in paragraph (c) whose EVMS has not been

recognized by the Cognizant Federal Agency as compliant according to paragraph (a);  
(vi) Provide documentation describing the process and results, including Government participation, of any third-party or self-evaluation of the system's compliance with the EVMS guidelines; and  
(vii) If the value of the Offeror's proposal, including options, is \$50 million or more, provide a schedule of events leading up to formal validation and Government acceptance of the Contractor's EVMS. This schedule should include progress assistance visits, the first visit occurring no later than 30 days after contract award, and a compliance review as soon as practicable. The Department of Defense Earned Value Management Implementation Guide (<https://acc.dau.mil/CommunityBrowser.aspx?id=19557>) outlines the requirements for conducting a progress assistance visit and validation compliance review.

(2) The Offeror shall provide information and assistance as required by the Contracting Officer to support review of the plan.

(3) The Government will review the Offeror's EVMS implementation plan prior to contract award.

(c) The Offeror shall identify in its offer the major subcontractors, or major subcontracted effort if major subcontractors have not been selected, planned for application of the EVMS requirement. Prior to contract award, the Offeror and NASA shall agree on the subcontractors, or subcontracted effort, subject to the EVMS requirement.

(d) The Offeror shall incorporate its compliance evaluation factors for subcontractors into the plan required by paragraph (b) of this provision.

(End of provision)

**L.9 NFS 1852.245–80 Government Property Management Information (JAN 2011)**  
**– ALT I (JAN 2011)**

(a) The Offeror shall identify the industry leading or voluntary consensus standards, and/or the industry leading practices, that it intends to employ for the management of Government property under any contract awarded from this solicitation.

(b) The Offeror shall provide the date of its last Government property control system analysis along with its overall status, a summary of findings and recommendations, the status of any recommended corrective actions, the name of the Government activity that performed the analysis, and the latest available contact information for that activity.

(c) The Offeror shall identify any property it intends to use in performance of this contract from the list of available Government property in the provision at 1852.245–81, List of Available Government Property.

(d) The Offeror shall identify all Government property in its possession, provided under other Government contracts that it intends to use in the performance of this contract. The Offeror shall also identify: The contract that provided the property, the responsible Contracting Officer, the dates during which the property will be available for use (including the first, last, and all intervening months), and, for any property that will be used concurrently in performing two or more contracts, the amounts of the respective uses in sufficient detail to support prorating the rent, the amount of rent that would otherwise be charged in accordance with FAR 52.245–9,



Use and Charges (June 2007), and the contact information for the responsible Government Contracting Officer. The Offeror shall provide proof that such use was authorized by the responsible Contracting Officer.

(e) The Offeror shall disclose cost accounting practices that allow for direct charging of commercially available equipment, when commercially available equipment is to be used in performance of the contract and the equipment is not a deliverable.

(f) The Offeror shall identify, in list form, any equipment that it intends to acquire and directly charge to the Government under this contract. The list shall include a description, manufacturer, model number (when available), quantity required, and estimated unit cost. Equipment approved as part of the award need not be requested under NFS clause 1852.245-70,

(g) The Offeror shall disclose its intention to acquire any parts, supplies, materials or equipment, to fabricate an item of equipment for use under any contract resulting from this solicitation when that item of equipment:

Will be titled to the government under the provisions of the contract; is not included as a contract deliverable; and the Contractor intends to charge the costs of materials directly to the contract. The disclosure shall identify the end item or system and shall include all descriptive information, identification numbers (when available), quantities required and estimated costs.

(h) Existing Government property may be reviewed at the following locations, dates, and times: *[To be determined by the Contracting Officer prior to award]*

(i) Existing available Government property listed in the provision at 1852.245–81 is provided “as-is”. NASA makes no warranty regarding its performance or condition. The offeror uses this property at its own risk and should make its own assessment of the property’s suitability for use. The equitable adjustment provisions of the clause at 52.245–1, Government Property as included in this solicitation, are not applicable to this property. The offeror must obtain the Contracting Officer’s written approval before acquiring replacement property when it intends to charge the cost directly to the contract.

(End of provision)

#### L.10 NFS 1852.245–81 List of Available Government Property (JAN 2011)

(a) The Government will make the following Government property available for use in performance of the contract resulting from this solicitation, on a no-charge-for-use basis in accordance with FAR 52.245–1, Government Property, included in this solicitation. The Offeror shall notify the Government, as part of its proposal, of its intention to use or not use the property.

(b) The Government will make the following Government property available for use in performance of the contract resulting from this solicitation, on a no-charge-for-use basis in accordance with FAR 52.245–2, Government Property Installation Operation Services, as included in this solicitation. The Offeror shall notify the Government of its intention to use or not use the property.

(c) The selected Contractor will be responsible for costs associated with transportation, and installation of the property listed in this provision.

(End of provision)

#### L.11 Communications Regarding This Solicitation

(a) Questions or comments regarding this solicitation must be submitted in writing, cite the solicitation number, and be directed to the following Government representative:

Name: Kirby L. Condrón, Contracting Officer  
Phone: 281-244-1297  
Fax: 281-244-2330  
E-mail: kirby.l.condron@nasa.gov

Address: Lyndon B. Johnson Space Center  
BG/Kirby L. Condrón  
2101 NASA Parkway  
Houston, TX 77058-3696

Oral questions will not be answered due to the possibility of misunderstanding or misinterpretation.

(b) Questions or comments should be submitted [TBD] to allow for analysis and dissemination of responses in advance of the proposal due date. Late questions or comments are not guaranteed a response prior to the proposal due date.

(c) Questions or comments shall not be directed to the technical activity personnel.  
(End of provision)

#### L.12 JSC 52.215-109 Proposal Marking and Delivery (OCT 2011) (JSC Procurement Instruction)

##### (a) Methods of Proposal Delivery

Proposals shall be delivered to the designated proposal receiving office by one of the following methods:

- U.S. Postal Service
- Commercial Delivery Service
- Delivery by company employee or other individual agent

Regardless of the method of delivery chosen, the Offeror is responsible for delivery of the proposal to the designated receiving office no later than the date and time stated on Standard Form 33 of the solicitation. The designated receiving office for purposes of the date and time deadline in this solicitation is Building 420, JSC Central Receiving.

##### (b) External Marking of Proposal Package(s)

All proposal packages must be closed, sealed, and marked in large letters "PROPOSAL –

DELIVER UNOPENED". Proposals packages must include the solicitation number, the contracting officer's name: Kirby L. Condrón, Mail Code BG, Building 269, and the Offeror's name and address clearly marked on the outside of the package.

The Offeror shall include a notice on the cover of the proposal package as follows:  
"NOTICE: THIS PROPOSAL MUST BE DELIVERED TO THE SPECIFIED ADDRESS NO LATER THAN (TBD)."

(c) Delivery Address

Proposals must be delivered to the address/location specified on the Standard form 33 of the solicitation.

Proposals submitted by commercial delivery service or hand carried packages must be delivered to:

NASA-Johnson Space Center  
Kirby L. Condrón  
Mail Code: BG  
Building 269  
2101 NASA Parkway  
Houston, TX 77050-3696

All proposals shall be delivered to the above address through NASA-JSC Central Receiving. The NASA JSC Central Receiving address:

NASA Lyndon B. Johnson Space Center  
Central Receiving, Building 420  
2101 NASA Parkway  
Houston, TX 77058-3696

**IMPORTANT:** JSC Central Receiving can only be accessed through JSC Gate 4, which is located off Space Center Boulevard. Offerors are cautioned that the delivery process may require an hour or more for packages to be screened through security and subsequently transported and delivered by the Offeror at the designated building while being accompanied by an employee of the U.S. Government. After 1:30 p.m., local time, incoming packages cannot be screened until the following business day.

Any attempt by an Offeror to deliver a proposal on a weekend or a Federal holiday shall be coordinated through the Contracting Officer at least 48 hours prior to the planned delivery date.

The Offeror is encouraged to notify the Contracting Officer one day in advance of the proposal submission.

Offerors are encouraged to contact Kirby L. Condrón at 281-244-1297 should assistance be required during delivery of proposals.

(End of Provision)

### L.13 Availability of Specifications

(a) For the purpose of this RFP, the Technical Library contains the official versions of applicable and reference documentation. No other version of the documentation should be used.

(b) All technical documentation which is incorporated directly by reference in this solicitation may be obtained from the International Space Station Common Communications for Visiting Vehicles (C2V2) which is available online at the following url:

<http://procurement.jsc.nasa.gov/issc2v2/>

In order to obtain a User-ID and password to access the documents above, please e-mail the following information to the Contracting Officer at Kirby.L.Condron@nasa.gov:

Request for access to the Technical Library

Requestor's Name

Full Company Name

Company Address

Company Security Point of Contact

Phone Number

Foreign Company (Yes/No)

CAGE Code

(d) All Copy-Righted technical documentation which is incorporated directly by reference in this solicitation cannot be placed on either the Technical Library or the Export Controlled Technical Library. If the Offeror desires to have these copy-righted documents to prepare their proposal they must be obtained, at the bidder's expense, from the organization that develops, establishes and/or publishes those documents.

(e) Upon request, the Contracting Officer will furnish to the Offeror NASA technical documents not incorporated by reference.

(End of Provision)

### L.14 Offeror Acceptance Period

Proposals submitted in response to this solicitation shall remain firm for at least 180 days after the date specified for receipt by the Government and shall contain a statement to this effect.

(End of Provision)

## L.15 Instructions for Proposal Preparation

This section provides detailed instructions to Offerors to be used in the preparation of proposals. It is organized as follows:

Paragraph	Paragraph Title
L.16	Introduction
L.17	Proposal Arrangement, Page Limitations, Copies, and Due Dates
L.18	Limited Tradeoff (LTO) Proposal Instructions
L.19	Other Proposal Requirements
L.20	Model Contract

## L.16 Introduction

In providing these instructions, the Government's intention is to solicit information that will permit a competitive evaluation of the Offeror's proposal. The information solicited will demonstrate the Offeror's competence and capability to successfully complete the requirements specified in the ISS Common Communications for Visiting Vehicles Statement of Work (SOW) and the criteria listed in section L. Generally, the proposal shall:

- Demonstrate understanding of the overall and specific requirements of the proposed contract;
- Convey the company's capabilities for transforming understanding into accomplishment;
- Provide in detail, the plans and methods for so doing; and
- Provide, as requested below, the price associated with doing so.

The proposal shall be detailed and complete enough to clearly and fully demonstrate that the Offeror understands the requirements and the inherent risks associated with the objectives of this procurement. It is inadequate to simply state that the Offeror understands and will comply with the requirements, or to paraphrase the requirements, such as: "standard procedures will be employed to..." and "well-known techniques will be used for..." The Technical Acceptability proposal shall comprehensively explain how the Offeror proposes to comply with the applicable specifications, as well as the techniques and procedures the Offeror proposes to implement.

Offerors are requested to provide information responsive to the items set forth below. This information is considered essential for the Government to conduct a fair and uniform evaluation of proposals in accordance with the evaluation factors provided in Section M. The items listed are not, however, all-inclusive and the Offeror should include in the proposal any further discussion necessary or useful in demonstrating the Offeror's ability to perform all the work under this contract. However, elaborate brochures or documentation, detailed artwork, or other superfluous embellishments are unnecessary and are not desired, unless specifically requested in a scenario response.

For a more complete understanding of this part of Section L, refer to Section M. The instructions in this part of Section L are directly related to the evaluation factors set forth in Section M.

## L.17 Proposal Arrangement, Page Limitations, Copies, and Due Dates

Offerors shall submit their proposals within the page limitations and arranged as set forth below.

**Table L-1: Overview of Proposal Volumes, Page Limitations, Proposal Copies, and Due Dates**

Date & Time Due	Delivery Location	Volume No.	Title	Page Limits	Electronic Format	Copies
TBD	JSC (See L.18)	I	Technical Acceptability	75 Pages		5 Hard copy, 2 CD-ROM
			Management Plan		MS Word	
			Technical Approach		MS Word	
			Schedule Reasonableness and Delivery Date		MS Word	
			Quality Plan	Not Included in Limit	MS Word	
			Small Business Utilization	Not Included in Limit	MS Word	
			Past Performance	Not Limited		5 Hard copy, 2 CD-ROM
TBD	JSC (See L.18)	II	Past Performance Information		MS Word	
			Predefined Value Characteristics	10 Pages		5 Hard copy, 2 CD-ROM
TBD	JSC (See L.18)	III	Description of Value Characteristics		MS Word	
			Cost/Price Proposal	Not Limited		5 Hard copy, 2 CD-ROM
TBD	JSC (See L.18)	IV	Cost Narrative	Not Limited	MS Word	
			Other Cost Templates in Attachment L-5	Not Limited	MS Word	
			Other Proposal Requirements	5 Pages		5 Hard copy, 2 CD-ROM
TBD	JSC (See L.19)	V	Organizational Conflict of Interest (OCI)		MS Word	
			Model Contract			3 Originals, 2 CD-ROM
TBD	JSC (See L.20)	VI	Sections A-J, with all fill-ins completed and signed SF 33, and Section K, Representations and Certifications, with all fill-ins completed	Not Limited	MS Word	

Offerors interested in submitting proposals shall consider the entire RFP and shall propose to all requirements as described in the RFP.

The proposal text shall be printed on non-glossy white 8 ½ x 11-inch paper with at least one-inch margins on all sides. The metric standard format most closely approximating the described standard 8 ½ x 11-inch size may also be used. Except for Volume IV Cost/Price Proposal, all volumes shall be prepared and submitted using a non-compressed Times New Roman font with single-spaced 12 point text printed on both sides of the sheet. Each side of the sheet, tab, or divider containing proposal material will be counted as a page. All pages shall be numbered sequentially within each volume. Offerors shall clearly mark and identify each of the pages subject to the page limitations.

Title pages, table of contents, cross-reference matrices, glossaries, acronym lists, page tabs, and section dividers that do not contain information that can be construed as proposal information will not be counted as part of the page limitations.

Tables, charts, graphs, plans, figures, diagrams and schematics shall be used wherever practicable to depict organizations, systems, layout, and implementation schedules. These displays shall contain font sizes no smaller than non-compressed 10 point, be uncomplicated, legible, and appropriate for the subject matter.

Foldout pages may only be used for large tables, charts, graphs, plans, figures, diagrams and schematics, not for pages of text. Foldouts shall be counted as two pages against the page limitations, shall be printed on one side only, shall not exceed 11 x 17-inches with at least one-inch margins on all sides, and shall fold entirely within the volume.

**Final Revisions:** If final proposal revisions are requested, separate page limitations, if applicable, will be specified in the Government's request for that submission.

**Excess Pages:** Pages submitted in excess of the limitations specified in this provision will not be evaluated by the Government and will be returned to the Offeror. Volumes shall be separately bound in 3-ring binders that permit the volume to lie flat when open. Staples shall not be used. A cover sheet shall be included on each binder, clearly marked with date of offer, volume number, title, copy number, solicitation number and the Offeror's name and point of contact information. The same identifying data should be placed on the spine of each binder (except for point of contact information). Information should not be incorporated by reference. A suitable table of contents shall be provided with each volume for ready reference to sections, tables, and figures. All pages in each volume shall be numbered sequentially with Arabic numerals for contents subject to page limitations or with lower case Roman numerals for contents not subject to page limitations (e.g., title pages, tables of contents, and acronym lists). No less than 10 point font shall be used for figures and tables. Offerors shall tab each subsection within each volume for ease of reference. Tabs and dividers are not included in the page count limitations. Mark one complete proposal "Original" for retention by the Contracting Officer. All copies of each volume shall contain identical information and formatting.

Each Offeror is required to submit its proposal in two formats, one conventional hard copy bound format in the quantities specified above, and one in an electronic format. The electronic submission must be compatible with the software and hardware specification described below. Electronic media must be labeled or tagged with the RFP Number, Company Name, Date Prepared, an indication of the files or range of files contained on the disk

marked and in accordance with FAR 52.215-1(e), Restriction on Disclosure and Use of Data, and FAR 3.104-5, Disclosure, Protection, and Marking of Contractor Bid or Proposal Information and Source Selection Information.

Electronic copies of the proposal shall be prepared and submitted in Microsoft Office® 2003 or 2007 applications (Word and Excel). Further, the Microsoft Excel spreadsheets shall be submitted in Microsoft Excel format, and not in a scanned Microsoft Word or Adobe PDF file. To the extent of any inconsistency between data provided electronically and proposal hard copies, the hard copy data will be considered to be the intended data. For electronic submissions, each volume of the proposal should be submitted as a separate electronic file.

Be sure to apply all appropriate markings, including those prescribed in accordance with FAR 52.215-1(e), Restriction on Disclosure and Use of Data, and FAR 3.104-5, Disclosure, Protection, and Marking of Contractor Bid or Proposal Information and Source Selection Information.

#### **L.18 Limited Tradeoff (LTO) Proposal Instructions**

This procurement will be conducted using a combination of technically acceptable baseline requirements (pass or fail) and tradeoff of past performance, cost or price, and predefined value characteristics. The Government seeks to select an offeror whose proposal represents the best value after evaluation. The baseline requirements are considered as basic government needs in determining technical acceptability.

Technical acceptability, past performance and cost/price are discussed in detail below.

##### **A. Technical Acceptability (Volume I)**

The proposal shall demonstrate that the offered items/services meet the baseline requirement. The Offeror shall describe or provide the following:

##### **1. Management Plan**

The Offeror shall provide a Management Plan that adequately addresses all aspects of DRD-C2V2-03, *Management Plan*.

##### **2. Technical Approach**

The Offeror shall provide a Technical Approach which discusses how the Offeror plans to accomplish the requirements in the Statement of Work and SSP 50930, ISS C2V2 Prime Item Development Specification (PIDS) document. The Offeror shall discuss their Contract Work Breakdown Structure (WBS) showing the contents of the elements of work to be performed. In addition, the Basis of Estimate and Outside Facility Usage formats described in the Cost Instructions of Volume IV shall be completed. These items will capture the resources needed to accomplish each element in the WBS and shall be identified in sufficient detail to permit an assessment of the adequacy of the types and amounts of skills proposed and any other items applicable to the proposed method of implementation.

##### **3. Schedule Reasonableness and Delivery Date**

The Offer shall provide a Schedule that adequately addresses the schedule requirements in Attachments J-4 and J-5 and DRD-C2V2-04, *Contract Schedules*.



#### 4. Quality Plan

The Offeror shall provide a Quality Plan that adequately addresses DRD-C2V2-21, *Quality Plan*.

#### 5. Small Business Utilization

All Offerors, except small businesses, shall complete the portion of the instructions under Small Business Subcontracting specific to the Small Business Subcontracting Plan in accordance with DRD-C2V2-02, *Small Business Subcontracting Plan and Reports*. Small businesses are not required to submit Small Business Subcontracting Plans; however, small businesses are required to indicate the amount of effort proposed to be done by a small business either at the prime level or at the first tier subcontract level.

All Offerors are required to respond to the Commitment to the Small Business Program.

##### (a) Small Business Subcontracting

##### (1) Small Business Subcontracting Plan (the Plan) Required by the FAR:

(i) This solicitation contains FAR clause 52.219-9, “Small Business Subcontracting Plan with Alternate II”. The Plan described and required by the clause, including the associated subcontracting percentage goals and subcontracting dollars, shall be submitted with the Offeror’s proposal.

(ii) The Contracting Officer’s assessment of appropriate subcontracting goals for this acquisition, expressed as a percent of TOTAL CONTRACT VALUE (basic and all options combined), is as follows:

Small Businesses (SB)	16.0%
Small Disadvantaged Business Concerns (SDB)	5.0%
Women Owned Small Business Concerns (WOSB)	5.0%
Historically Black Colleges and Universities (HBCU)/Minority Institutions (MI)	1.0%
HUBZone Small Business Concerns (HBZ)	1.0%
Veteran Owned Small Business Concerns (VOSB)	1.0%
Service-Disabled Veteran-Owned Small Business Concerns (SDVOSB)	0.5%

(iii) The numbers above reflect the Contracting Officer’s assessment of the appropriate subcontracting goals to be achieved at the completion of contract performance. If it is anticipated that the proposed small business goals will not be met by the submission of the first Individual Subcontracting Report (ISR) for this effort as required by 52.219-9 Small Business Subcontracting Plan, the Offeror should discuss their approach to include a timeline for meeting these goals and the rationale for it.

(iv) Offerors are encouraged to propose goals that are equivalent to or greater than those recommended by the Contracting Officer. However, Offerors must perform an independent assessment of the small business subcontracting opportunities.

(v) The Plan submitted with the proposal shall be incorporated in Section J as Attachment J-7 in the resulting contract. The requirements in the Plan must flow down to first tier large

business subcontracts expected to exceed \$650,000 or \$1,500,000 for construction of a public facility. Although these first tier large business subcontractors are encouraged to meet or exceed the stated goals, it is recognized that the subcontracting opportunities available to these subcontractors may differ from those suggested in the solicitation based upon the nature of their respective performance requirements.

(vi) Offerors are advised that a proposal will not be rejected solely because the submitted Plan does not meet the NASA recommended goals that are expressed in paragraph (a) (2) above in terms of percent of TOTAL CONTRACT VALUE (basic and all options combined). NASA will consider the amount of work being retained for performance by the prime contractor in-house when determining whether a subcontracting plan is acceptable. Offerors shall discuss the rationale for any goal proposed that is less than the Contracting Officer's recommended goal in any category. In addition, the Offeror shall describe the efforts made to establish a goal for that category and what ongoing efforts, if any, the Offeror plans during performance to increase participation in that category.

(vii) In addition to submitting a Small Business Subcontracting Plan in accordance with Section I, FAR clause 52.219-9, Alternate II, Offerors shall complete DRD-C2V2-02, *Small Business Subcontracting Plan and Reports*, which provides a breakdown of the Offeror's proposed goals, by small business category, expressed in terms of both a percent of TOTAL CONTRACT VALUE and a percent of TOTAL PLANNED SUBCONTRACTS. Offerors shall modify the exhibit to show the proposed subcontracting goals for the basic contract requirement and each option separately.

Example of Subcontracting Goals, expressed in both contract value and subcontract value, for a contract proposed at \$100M with estimated subcontracts of \$50M:

	<i>Column A</i>	<i>Column B</i>	<i>Column C</i>
<b>Business Category</b>	<b>Goal as Percent of Contract Value</b>	<b>Dollar Value to be subcontracted per Category</b>	<b>Goal as Percent of Subcontracting Value</b>
Small Business Concerns	25 percent	\$25,000,000	50 percent
Large Business Concerns	n/a	\$25,000,000	50 percent
Total Dollars to be Subcontracted	n/a	\$50,000,000	100 percent
<i>The following small business subcategories do not necessarily add up to the percentage and dollar amount in the “Small Business Concerns” category above, since some small businesses do not fall into any of the subcategories below, while others will fall into more than one subcategory below.</i>			
<b>Subcategories of Small Business Concerns</b>			
Women Owned Small Business Concerns	9 percent	\$9,000,000	18 percent
Small Disadvantaged Business Concerns	5.5 percent	\$5,500,000	11 percent
Veteran Owned Small Business Concerns	2.5 percent	\$2,500,000	5 percent
Service-Disabled Veteran-Owned Small Business Concerns	1.5 percent	\$1,500,000	3 percent
HUBZone Small Business Concerns	1.5 percent	\$1,500,000	3 percent
Historically Black Colleges and Universities/Minority Institutions	1.5 percent	\$1,500,000	3 percent

- It is recommended that Offerors first complete Column B by entering the dollar amount the Offeror proposes to subcontract to each business category and subcategory.
- To complete Column A, divide the dollar amount in Column B by the total offered price of the proposal (that is, total contract value). In the example above, Column A for Veteran Owned Business Concerns = \$2,500,000 divided by \$100,000,000, or 2.5 percent.
- To complete column C, divide the corresponding amount in Column B by the amount in the “Total Dollars to be Subcontracted” cell in Column B. In the example above, Column C for Women-Owned Small Businesses = \$9,000,000 divided by \$50,000,000, or 18 percent.
- Note: the “Total Dollars to be Subcontracted” amount in Column C will always be that category divided by itself (100 percent if any dollars are subcontracted).

**(b) Commitment to the Small Business Program**

(1) All Offerors shall briefly describe work that will be performed by small businesses. Proposals should also identify any work to be subcontracted that is considered “high technology.” High Technology is defined as research and development efforts that are within or advance the state-of-the-art in technology discipline and are performed primarily by professional engineers, scientists, and highly skilled and trained technicians or specialists.

(2) If the subcontractor(s) is known, Offerors must connect the work to the subcontractor and specify the extent of commitment to use the subcontractor (s) (enforceable vs. non-enforceable commitments). (Small Business Offerors shall provide this information to the extent subcontracting opportunities exist in their approach to performing the requirement.)

(3) All Offerors shall provide information demonstrating the extent of commitment to utilize small business concerns and to support their development. Information provided should include a brief description of established or planned procedures and organizational structure for Small Business outreach, assistance, participation in the Mentor Protégé program, counseling, market research and Small Business identification, and relevant purchasing procedures. For Other than Small (Large) Business Offerors, this information should conform to applicable portions of the submitted Small Business Subcontracting Plan. Small Business Offerors shall provide this information to the extent subcontracting opportunities exist in their approach to performing the requirement.)

**B. Past Performance (Volume II)**

- (1) Provide information from organizations and companies from which your company has previously performed work, in order for the Government to obtain appraisals of past performance and for Key Personnel (Program Manager, Lead or System Engineer, and Requirements or Verification Lead) involved in performing this work. Offerors and any major subcontractors (subcontracts estimated annual value greater than \$500K) shall each provide information on five past contracts (subject to the page limitation constraints). If the Offeror proposes a joint venture or a prime-subcontractor relationship, provide the same information for each team member or subcontractor company proposed. References with Government contracts are preferred, but not required.
- (2) Offerors shall consider the relevancy, recency and magnitude of the effort(s) as they relate specifically to this requirement. Offerors are advised that the Government's evaluation of submitted contracts for past performance will include an evaluation of how recently performance has occurred. Only contracts with performance within 3 years from date of the solicitation will be considered recent. Offerors with no past performance experience shall so state.
- (3) The following information shall be provided:
  - Contract number
  - Contract value
  - Employing Agency/Company Name
  - Point of Contact (including address, telephone and fax numbers, and e-mail addresses)
  - If a Government Agency, include both the Contracting Officer and Contracting Officer's Technical Representative points of contact
  - Contract Description
  - Place of Performance
  - Period of Performance
  - Contract Type
  - Status of Contract ((current, terminated (if so, why), successfully completed (include completion date))
  - A discussion of the relevant contract technical requirements, integration successes, any unique schedules requirements, cost performance, problems encountered and initiative in problem resolution, and overall performance
  - Consent Letters executed by each subcontractor, teaming partner, key personnel (Program Manager, Lead or System Engineer, and Requirements or Verification Lead) and/or joint venture partner, authorizing the release of past performance information so the Offeror can respond to such information. See sample consent letter at attachment L-3.
  - Submit information on contracts that the Offeror considers relevant in demonstrating the Offeror's ability to perform the proposed effort. The submission shall include rationale supporting the Offeror's assertion of relevancy. This submission shall clearly detail what portions of the Statement of Work, the prime, joint venture, subcontractors and key personnel are responsible for and/or proposing to do as they relate to the relevant contract being proposed. For past performance consideration, key personnel shall only be submitted for areas of the Statement of Work, where no other relevant past performance applies. For a

description of the characteristics or aspects the Government will consider in determining relevance, see Section M.7, B. Past Performance Relevancy.

- (4) Submit Key Personnel resumes (Program Manager, Lead or System Engineer, and Requirements or Verification Lead) in accordance with Attachment L-1.
- (5) In addition to the information above, Offerors and any major subcontractors, as defined above, shall each submit the Past Performance Questionnaire, Attachment L-2, to each of the five references. The Offeror is responsible for ensuring that each of its references, including those from its major subcontractors, returns the two copies of each questionnaire directly to the Contracting Officer in a sealed envelope, by fax, or e-mail to the contact identified in section L.11 Proposal Marking Instructions.
- (6) Offerors may include up to one page of introductory material about the experience and performance of the Offeror and subcontractors (if applicable). The Offeror may submit additional reference information on experience and past performance for consideration. This shall be subject to the page limitation constraints.
- (7) Offerors shall provide the following performance data with explanatory remarks on contracts performed in the last three years. Offerors shall identify the applicable North American Industrial Classification System (NAICS) Code for each contract and shall include points of contact for each contract. If a joint venture or prime-subcontractor relationship is proposed, the same information shall be provided for each company proposed. Explanatory statements shall be included as appropriate. For all work performed during the past three years, Offerors shall provide the following:

Environmental Data:

Copies of any and all environmental non-compliance correspondence and citations from federal, state, or local agencies or authorities with explanatory remarks.

Safety Data:

Copies of any and all OSHA citations with explanatory remarks.

Records of the company's OSHA recordable injuries and illnesses. These records shall include, for each worksite, as a minimum, 1 copy of each year's OSHA logs (Forms 300 and 300A) as required by Title 29 of the Code of Federal Regulations, Section 1904.5(d) including the applicable NAICS code, the number of employees at the worksite and the calculated OSHA recordable frequency rate.

A list of all insurance carriers providing workers compensation coverage (or equivalent), including dates of coverage. Include points of contact and phone numbers. Offerors shall authorize the listed insurance carriers to respond to Government inquiries recording the Offeror's past safety performance.

Calculations supporting the Offeror's workers' compensation experience modifier, including the state formula used for the computation, along with the loss ratio for each of the past three years (where the loss ratio is defined as the ratio of losses to premium). Show all figures used for computation.

A letter from the insurance carrier summarizing the Offeror's liability and lawsuit history related to safety and health performance for the past three years including a

history of changes to the experience modifier rate. If an Offeror self insures, provide and certify the same information (except the experience modifier rate history) with the signature of the responsible corporate officer or official.

(8) **Small Business Past Performance:**

The prime Offeror shall provide a statement of small business participation (targets, record, and type of work subcontracted ) over the past 3 years on work that is relevant to this effort, with special emphasis on the division of the company which will perform the proposed contract.

(9) **Past Performance Questionnaires**

Separate from the General Past Performance narrative contained in Volume II, the Offeror shall provide references from organizations and companies for whom work has been performed.

For each company (including joint-ventures, subcontracts and key personnel as applicable) associated with this offer, excluding minor subcontracts below \$500K per year, the Offeror shall provide their customer references with an Attachment L-2, Past Performance Questionnaire Template. This shall be done for at least three contracts completed within the past 3 years containing some or all of the functions defined in the SOW, if such experience exists. The Offeror shall request the customer references to fully complete the questionnaire in accordance with the instructions on the form and to return it in accordance with the return instructions on the form. The Offeror is responsible for ensuring that questionnaires are submitted in time

**C. Predefined Value Characteristics (Volume III)**

Offerors are required in their proposal to meet the baseline requirements. Furthermore, Offerors shall address the predefined value characteristics in their proposal. If a predefined value characteristic is not applicable to the Offeror's proposal, the Offeror shall state so. The proposal shall clearly mark what information is to be evaluated under the predefined value characteristics and provide sufficient detailed explanation.

The following predefined value characteristics are applicable to this procurement and shall be demonstrated by the Offeror:

**Value Characteristic A (VCA)** – Technology Readiness Level (TRL) greater than or equal to 6 (See Attachment L-5 for further description)

**Value Characteristic B (VCB)\*** – Size, weight, or power usage less than the baseline requirements in SSP 50930, ISS C2V2 Prime Item Development Specification (PIDS).

**Value Characteristic C (VCC)\*** – An information data rate\* greater than baseline requirement in SSP 50930, ISS C2V2 Prime Item Development Specification (PIDS).

**Value Characteristic D (VCD)** – Major subassemblies (e.g., antenna, receiver, transmitter, transceiver, transponder) have been purchased before and are readily available to commercial, industrial, or military customers.

**Value Characteristic E (VCE)** – Delivery dates are earlier than requirements per Attachment J-5.

\*To receive, credit for VCB or VCC, the Offeror shall fill in the proposed size, weight, and power usage (VCB) and the proposed information data rate (VCC) below. Per SOW Section 2.6, the C2V2 size, weight, power, and information data rate values, as proposed below, shall be incorporated into the Contractor flight unit deliverable specifications. Information data rate is defined as the data rate prior to error correction encoding.

For VCB and VCC, the contractor shall provide the delta between the minimum specifications required to meet Technical Acceptability and the additional value proposed to receive credit for these Value Characteristic's.

Value Characteristic	Delta from Minimum Requirement for Technical Acceptability
VCB	
VCC	

#### **D. Cost/Price (Volume IV)**

##### **Instructions for Preparation of the Cost Proposal**

Certified cost and pricing data are not required; however, other than cost and pricing data are required. To ensure that the Government is able to perform a fair assessment of the proposed cost, each Offeror is required to submit a cost proposal that is suitable for evaluation. A cost volume that is suitable for evaluation shall:

1. Account for all resources necessary to complete requirements of this RFP.
2. Have a Cost Proposal that is traceable to the Technical and Management proposal(s).
3. Explain in detail all pricing and estimating techniques.
4. Disclose the basis of all projections, rates, ratios, percentages, and factors in sufficient detail to facilitate the Streamlined Procurement Team (SLPT's) understanding and ability to mathematically verify these estimating tools.
5. Comply with applicable Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS), and governing statutory requirements.
6. Include a narrative that explains all elements of cost projections and fee policies including any proposed cost ceilings and team fee sharing arrangements, if proposed.
7. Include all templates required by this RFP.

The Offeror's cost proposal shall be submitted in one volume labeled Volume IV Cost/Price Proposal.

##### **PRICING WORKBOOK:**

**Format:** In order to facilitate a fair and thorough evaluation, the Pricing Workbook includes tabs. The workbooks/files shall be automated to the greatest extent possible.

The goal of the automated Pricing Workbook is to provide a comprehensive working model of the Offeror's proposed costs in an automated format. The Pricing Workbook shall be



designed to facilitate changes to source data such as direct labor hours and/or rates, overhead and G&A rates etc. and be sophisticated enough to compute the total impact of various changes to both cost and price. It is important that the Offeror's model facilitate this process to ensure the fidelity of the offer and be error free. For example; the model must be able to compute the cost and price impact of:

1. Increasing (or decreasing) the number or type of proposed Full Time Equivalent (FTE) personnel.
2. Increasing (or decreasing) the overhead rate(s).

**Formulas:** All formulas used in the tabs must be clearly visible in the individual cells and be verifiable. Although linking among the spreadsheets or workbooks may be necessary; the use of external links (source data not provided to NASA) of any kind is prohibited. The tabs must not contain macros or hidden cells.

**Prohibition to Lock Cells:** The Pricing Workbook and all its associated tabs shall not be locked/protected or secured by passwords.

### **CD Cost Proposal Organization**

The Government intends to use a personal computer using Microsoft Excel to aid in the evaluation of the cost proposal. In addition to the hardcopy requirements found in the preceding section, each prime and major subcontractor is required to submit their Pricing Workbook and any other electronic cost data, including formulas, on a CD.

Each CD shall have an external label indicating:

1. The name of the Offeror,
2. The RFP number, and
3. The files/workbooks or range of files/workbooks contained on the CD.

Labeling the CD case only does not fulfill this requirement. The CD itself must be labeled. The use of a permanent marker to label the CDs by hand is acceptable.

When data are required for multiple years within a tab, then submit the information worksheet stacked vertically. For example the Burdened Rates are required for each year of the contract; therefore 5 vertically stacked templates shall be submitted under a tab titled Burdened Rates starting with the Contract Year 1 descending to the final Contract Year.

### **Workbook Tab Names:**

1. **Resources by Year** - Captures Labor and Non-Labor Resources by Contract Year
2. **Direct Labor Mapping** – Captures the mapping of the Offeror's labor categories to the standard labor categories
3. **Direct Labor Rate Entry** – Captures the Composite Direct Labor Rate by SLC & Year
4. **Overhead Rates**– Used for Overhead and Other Indirect Rates capture by year
5. **G&A Rate** – Captures the G&A Rate components by Year
6. **Indirect & Other Rates** - Summary capture of indirect rates, FCCOM and Fee
7. **Minor Subcontractor Costs**– Captures the costs of Minor Subcontractors by company and year
8. **Burdened Rates** – The Tab draws from Direct Labor Rate Entry and Indirect & Other Rates for Prime and Major subcontractors to construct the fully burdened composite rates by SLC and Year

9. **Summary Costs** – This draws rates from the Burdened Rates Tab and Resources from the Resources by Year Tab to compute the Offeror's cost by Contract Year.
10. **Points of Contact & Audit Data** (POC Government and Contractor Audit)
11. **Technical Resources Template** – Captures the labor resources by contract year

#### **Technical Resources Instructions**

The Technical Resource tabs are included to capture the proposed resources in a structured format which will accelerate evaluation time. Offerors shall complete the Technical Resource tabs and provide a Basis of Estimate for each element. The structure of the tabs is not intended to dictate any preferred approach; rather it was created to ensure a fair and thorough evaluation of all elements necessary to fulfill the statement of work. The tabs for Summary, Basic, Option A, and Option B shall be completed and reconcile with the Cost/Price proposal.

Hard copies of these tabs are to be included in Volume IV. These templates may be printed on any 8 1/2" x 11" or Legal size paper and are not included in the page count limitation for Volume X. In addition, electronic versions of these templates shall be submitted in the Microsoft Excel format. These electronic versions are to be included in the Offeror's Pricing Workbook. The EPM requirements are further defined in the cost instructions below.

#### **Basis of Estimate (BOE) Templates Section L – Attachment L-5, Other Cost Templates)**

The Offeror shall complete the BOE form provided in Attachment L-5 in accordance with the Offeror's proposed approach as described in L.18 Technical Approach. The Offeror shall submit a printed copy of all BOE's in Volume I, Specific Technical Understanding and Resources along with the electronic version. The Offeror is not limited to a specific number of pages per BOE. The BOE data shall reconcile with the data used in the cost proposal for pricing purposes. Also, the discussion addressing understanding and resources should be consistent with the proposed overall technical approach submitted for Technical Approach. For each BOE the Offeror shall include:

A) Technical Understanding of Requirement: Provide, in a narrative, sufficient discussion to fully demonstrate the Offeror's understanding of the technical requirements in this area. Describe the Offeror's technical approach for providing excellent performance of tasks as required by the Statement of Work for the designated SOW area.

- Describe the use of subs and consultants in the approach to ensure a thorough understanding of the proposed approach.
- Describe where and why specialists are proposed (e.g. "thermal engineer used, priced as an SLC Engineer 3").

B) Basis of Estimate Rationale: Explain in a narrative how the proposed labor resources and non-labor resources (including materials) were estimated including any assumptions made regarding the requirements that led to the proposed resources such as:

- "We assume that a verification plan for the XYZ deliverables already exists and all we are responsible for is the maintenance of the plan."
- Include sufficient explanation to convince the Government that the proposed resources are realistic for the proposed technical and management approach.

- Discretely describe the estimation methodology of each software code deliverable, the number of lines of code by resource, and cost the relationship to the resources described in "C) Resources" below.

C) Resources: Include all proposed Labor, Material Cost, Travel, or other costs necessary to complete the work identified on the BOE.

**Outside Facility Usage (Section L, Attachment L-5 – Other Cost Templates)**

The Offeror shall complete the Outside Facility Usage tab found in the attachment:

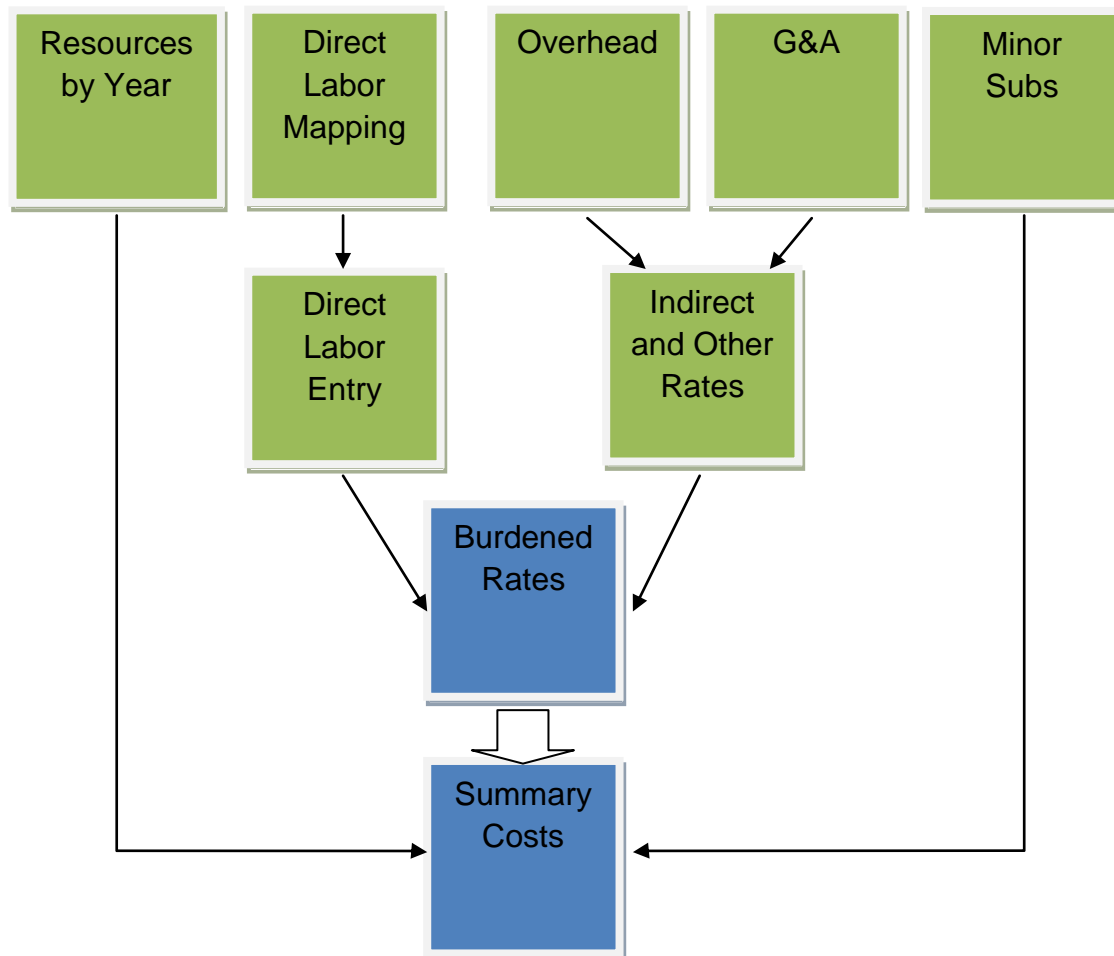
1. This tab is included to capture the usage of facilities, equipment and labs outside of the Prime critical for completion of the Statement of Work. This will be used to evaluate that critical steps and tests are included in the work and to ensure that government facilities have been offered in a manner that is fair to all Offerors. The first and second columns shall be completed for both Government and Commercial furnished facilities and equipment.
2. The third through sixth columns shall be completed for Government facilities only.
3. The fourth column shall identify the Government furnished facilities and equipment (GFE) as "rent free" by stating "yes" or "no." "Rent free" is any (that has been given to the Offeror at no charge due to the agreement made.
4. The fifth column shall be populated with the "rent" price of the GFE. "Rent" is the cost of the GFE that is actually charged to the Offeror or the cost that would be charged without the agreement with the federal government that allows it to be used free of charge. If detailed pricing and support cannot be obtained from the government entity in time to be included in this proposal, the Offeror shall obtain a rough order of magnitude (ROM) price for the GFE from the government entity and include this price in the column.
5. The sixth column shall identify the basis for the estimate given in the previous column.

**Technical Resources Summary**

The Technical Resources Summary is required to summarize all proposed labor resources for the proposed performance period at the WBS level specified. These resources shall be an accumulation of all the resources justified in the Offeror's Basis of Estimate (BOE) in accordance with the instructions. The Offeror shall enter the proposed labor resources as Full Time Equivalents (FTEs) in the tabs. These will sum at higher WBS levels and then summarize at a composite level on the Summary TRT tab. The tabs are automated but the Offeror shall validate accuracy of the cells and the formulas to ensure accuracy and that the data reflects the Offeror's proposed approach.

**COST/PRICE INSTRUCTIONS:**

The following flowchart illustrates how the different templates relate to one another to create a complete representation of proposed cost:



The instructions for required cost tabs apply to the prime Offeror and all major subcontractors with an annual estimated annual value that exceeds \$500,000 for developmental work (non-parts purchase) or \$1 Million (M) for all other subcontracting. Subcontractors with an estimated annual value below \$500K for developmental work or \$1M for all other contracting are considered minor subcontractors.

Although the workbook is populated with formulas, it is the Offeror's responsibility to ensure that the formulas are correct and properly calculate the Offeror's proposed cost and fee.

Offerors shall submit the workbook with stacked spreadsheets showing the development of the cost for the Basic contract, Option A, Option B, and the Contract Summary. For ease of evaluation, the Contract Summary costs will be found starting in row I, with Basic, Option A, and Option B found below the summary in this order.

### **Standard Labor Categories (SLC)**

The Offeror shall map their labor categories to the SLCs using the guidelines provided below. These guidelines do not address all the possible skills, or requirements that any one occupation or profession may require. Therefore, Offerors are allowed to include additional labor categories that do not easily map into the SLC below, however; the Offeror must provide job descriptions similar to the guidelines provided in below. The Offeror may use work experience equivalence in place of the academic requirements cited where it is an appropriate and customary substitution in establishing wages. The mapping of Offeror's labor categories to the RFP SLCs will be captured in the Direct Labor Mapping tab described below.

STANDARD LABOR CATEGORY (SLC)	LEVELS WITHIN THE SLC	DESCRIPTION
<b>Program Manager</b>	Program Manager	Serves as the Contractor's primary contract manager, and shall be the contractor's authorized interface with the Government Contracting Officer (CO), the contract level Contracting Officer's Technical Representative (COTR), government management personnel and customer agency representatives. Responsible for formulating and enforcing work standards, assigning contractor schedules, reviewing work discrepancies, supervising contractor personnel and communicating policies, purposes, and goals of the organization to subordinates. Shall be responsible for the overall contract performance.
<b>Manager</b>	Manager	A BS degree or higher with experience in progressively challenging management positions, including successfully managing people.
<b>Supervisor</b>	Supervisor	5 or more years experience in positions with experience in supervising or directing other personnel.
<b>Engineer</b>	Engineer 1	BS degree in engineering, performing professional engineering work.
	Engineer 2	BS degree in engineering, with a minimum of 3 years of professional experience, performing professional work in design, development, test, etc.
	Engineer 3	BS degree in engineering, with a minimum of 5 years of professional experience, performing professional work in design, development, test, etc.
	Engineer 4	BS degree in engineering, with a minimum of 10 years of professional experience, performing professional work in design, development, test, etc.

<b>IT</b>	IT 1	AA degree or IT certified professional or job related experience
	IT 2	BS degree in computer science or related field
	IT 3	BS degree in computer science or related field with a minimum of 3 years experience
<b>Analyst</b>	Analyst 1	AA degree or job related experience in analytical work such as configuration mgmt
	Analyst 2	BS degree in job related area in analytical work
	Analyst 3	BS degree in job related area in analytical work with a minimum of 5 years experience
<b>Technician</b>	Technician 1	Technical training or equivalent experience in a related technical field such as calibration, mechanics, engineering, etc.
	Technician 2	AA in a related Technical field
	Technician 3	AA in a related Technical field and 5 years experience or a BS
<b>Business Specialist</b>	Business Specialist 1	No degree or an AA in field of specialization such clerical or secretarial
	Business Specialist 2	BA/BS degree in the field of specialization of business such as accounting or finance.

### Examples of Mapping Skills to SLCs

The skills below are provided only as examples of how certain labor categories proposed by the Offeror may fit into the SLCs identified by the Government.

#### Business Specialist

*Buyer, Procurement Clerk, Accounting Clerk, Budget Analyst, Financial Analyst, Cost Accountant*

#### Administration Assistant

*Secretarial, Clerical, Cataloger, Courier, Supply Clerk, Customer Service Clerk, Supply Clerk.*

### Direct Labor Mapping

This tab is included to capture the rate development of the composite RFP Labor Categories. The first column should be filled with the titles of the Offeror's labor categories adjacent to the appropriate SLC which were used to develop the composite Standard Labor Category rates. "Composite" is used to convey the use of a mixture of various Offeror direct labor category rates. The associated percentage usage of each Offeror category and the associated rate shall be entered into the "% Usage of Company Category" and the "Direct Labor Rate" columns respectively for each contract year. Each composite RFP Labor Category rate should be calculated using a weighted average in the RFP Labor Category Composite Rate for each contract year.

### Direct Labor Rate Entry

This tab is included to capture the Offeror's composite RFP direct labor rates for the prime and major subcontractors. . The Contract Year columns must be completed for all years of the contract with all proposed rates. If these rates are escalated with an escalation rate, show the rate prominently at the top of the tab and populate the contract years with formulas. This will facilitate adjustments and the identification of the escalation rate.

### **Overhead Rates**

This tab is included to capture the Offeror's Overhead rates and Indirect Rates that are used in accordance with the Offeror's accounting practices. This tab also clearly shows the translation from contractor Fiscal year to the Contract Year.

The prime Offeror and all major subcontractor(s) must provide their Forward Pricing Rate Agreement (FPRA) used to price indirect cost for this proposal or this template. This template provides insight into the composition of the burden pool for the proposed overhead rates. A separate template for each of the proposed burden pools is to be completed. In addition, provide overhead cost history for the prior three years and for the term of the contract. The basis for projections of overhead shall also be provided and an explanation in support of any significant changes in either expenses or base of application that exist from one year to the next. In the event the Offeror's fiscal year and anticipated contract year do not coincide, the Offeror shall complete the rate reconciliation showing how the fiscal year overhead rates result in the proposed overhead rates for each contract year. The Government does not encourage or discourage proposal of indirect rate ceilings. However, if proposed, the template includes an area for indirect ceilings.

A few cost elements are included in the template to represent the types of cost detail the Government requires visibility into. If these cost elements are not applicable to any proposed indirect cost pool, leave these blank.

### **G&A Rate**

This tab is included to capture the Offeror's G&A rate that is used in accordance with the Offeror's accounting practices. This tab shows the translation from contractor Fiscal year to the Contract Year.

The prime contractor and all major subcontractor(s) must provide their Forward Pricing Rate Agreement (FPRA) used to price G&A cost for this proposal or this template. This template shall provide insight into the composition of the burden pool for the proposed General and Administrative (G&A) rate. Identify the estimated G&A expense and explain the method for its calculation. Provide G&A cost history including the actual expense pool and application base amounts for the prior three years. The basis for projections of G&A shall also be provided and an explanation in support of any significant changes in either expenses or base of application that exist from one year to the next. In the event the Offeror's fiscal year and anticipated contract year do not coincide, the Offeror shall complete the rate reconciliation showing how the fiscal year G&A rate results in the proposed G&A rate for each contract year. The Government does not require or mandate that the Offeror propose indirect rate ceilings. However, if proposed, the template includes an area for G&A ceilings.

A few cost elements are included in the template to represents the type of cost detail the Government requires visibility into. If these cost elements are not applicable to the Offeror's proposed G&A cost pool, leave these blank.

### **Indirect and Other Rates**

This tab is included to capture all non-direct rates in an easily viewed table, facilitating review and adjustments by both the government and the Offeror. This shall be completed for both the Prime Offeror and the major subcontractors.

Overhead rates and the G&A rate shall be connected by formula from the Overhead and G&A tabs to capture these rates. The Prime Burden of subcontractor contracts, Facility Capital Cost

of Money (FCCOM), and Fee shall be input for each contract year.

#### **Minor Subcontractor Costs**

The minor subcontractor template is required of the prime only. This template is intended to provide the SEB a concise assessment of the substance of minor subcontracts. Minor subcontractors are subcontracts with an estimated annual contract value below \$500K for development and below \$1M for all other work. Two examples showing how this template is to be completed are included on this template.

#### **Consolidated Bill of Materials (CBOM)**

The Offeror shall submit a CBOM at the WBS levels provided in the attachment for the C2V2 System, the C2V2 Integration, and the C2V2 Management. These shall be submitted in the C2V2 template provided in the RFP with the roll-up being automated and calculating from the component tabs. The components tabs must include columns showing Provider, SOW/WBS #, Part Number, Part Description, Unit of Measure (UOM), Quantity, Unit Cost, Total Cost, Long lead items and the Quality. Provider shall identify which company is providing the material, in addition Long lead items shall be identified for all items with a lead time equal to or greater than 90 days by placing the estimated lead time in the cell provided. The Quality column will be completed by placing an S (S-Level), B (B-Level), I (Industrial Grade), or C (Commercial Grade) as referenced in SSP 30312, Electrical, Electronic, and Electromechanical Parts Management and Implementation for the Space Station Program. The use of pivot-tables to create subtotals of the WBS within the component tabs would be beneficial and is encouraged for NASA's evaluation, but is not required.

#### **Burdened Rates**

This tab calculates the fully burdened rates for the Offeror prime and major subcontractors. The rates are pulled from the Direct Labor Rate Entry tab and the Indirect and Other Rates tab for the Prim and the Major Subs to calculate composite rates for each SLC by contract year. Each Contract Year should be represented by a table stacked within the tab starting with Contract Year 1 at the top, and descending for the next contract year.

The Direct Labor Rate column should be populated by formula from the Direct Labor Mapping tab for each Standard Labor Category and Year. The Overhead Rate, G&A Rate, FCCOM Cost, Fee Cost should be populated by formula to the appropriate row and column in the Indirect & Other Rate tab. Major Subcontract rates should be pulled for each SLC from the Major Subcontractor's Burdened Rates tab. The Offeror should input the name of each Major subcontractor in the appropriate column. Only fill in those columns that represent the number of subcontractors. If the number of major subcontractors proposed exceeds the number of columns identified for major subcontractors, then add the additional columns and modify the tab for these additional subcontractors. Ensure that the formulas calculate the offer correctly after modifications are made.

Enter the percentage that each company's SLC (prime and subcontractors) are anticipated to be used in the mix of the composite rate. Examples are included in the tab for clarity.



**Summary Costs**

This tab calculates the total cost and fee for all Contract Years. This should be totally self calculating based on inputs from other tabs. The Summary Cost tab is split into three distinct areas; Labor Resources, Burdened Labor Rates and the calculations capturing the non-labor resources, minor subcontractor costs, and Fee in the final area. There are columns for each contract year with the total all years to the right of these.

The Burdened Labor Rates are pulled from the Burdened Rates tab. The final area contains the formulas to calculate the cost by SLC. The Non-Labor Resources are pulled from the Resources by Year tab, with the Minor Subcontractor costs being pulled from the Minor Subcontractor tab. The materials costs, any Indirect Material Rates and any Indirect Material Costs shall be captured in the Non-Labor Resources. If additional rows are necessary to show the indirect rates and associated costs, add new rows in the template. Fee is pulled from the Indirect and Other Rates tab for each contract year.

**Financial Accounting Standard (FAS) 13 Analysis**

The Offeror shall perform a FAS 13 analysis for any proposed lease costs, as required by FAR 31.205-36 (Rental Costs) and FAR 31.205-11 (Depreciation), in determining the classification of a lease as operating or capital. This applies to facilities and capital equipment.

**Cost of Money for Facilities Capital**

The Offeror may choose to include the cost of money for facilities capital as authorized by Cost Accounting Standard (CAS) 414 and FAR 31.205-10 (Cost of Money) in the proposal. In the event the Offeror does not propose cost of money for facilities capital, FAR Clause 52.215-17, "Waiver of Facilities Capital Cost of Money" shall be included in the contract.

**Fee**

Provide a description of the Offeror's proposed fee structure. If a sharing fee pool arrangement is proposed, include a discussion of the arrangement and the distribution of fee earned. Include a discussion of how the proposed fee was derived and why it is reasonable for the type of effort.

Fee shall be proposed at the level appropriate for Basic, Option A, Option B or total fee level; dependent upon which level the Cost structure is broken down. The total fee level defined as the sum of target Technical Performance Incentive + target Delivery Incentive + target Cost Incentive fee. The fee shall be allocated in the ratios of 40% for Technical Performance Incentive fee, 35% for target Delivery Incentive fee, and 25% for target Cost Incentive fee of the total fee proposed. The Basic work shall have Technical Performance Incentive Fee, Delivery Incentive Fee, and Cost Incentive fee applied to it in accordance with Section J-10, C2V2 Incentive Fee Plan. Options A and B shall only have Cost Incentive fee applied in accordance with Section J.10.

The Offeror shall define how the fee will be applied to the maximum fee, minimum fee, and the share ratios; for both over-runs and under-runs. The Technical Performance Incentive fee, Delivery Incentive fee and Cost Incentive fee targets shall be proposed based on the description of each in Section B and in the Incentive Fee Plan in Section J-10.

## **A. Technical Performance Incentives**

### **Technical Performance Incentive A – Reworks, Modifications, and Repairs:**

- Total Schedule Weighting at 40% of Total Target Fee x Technical Performance Incentive A Weighting at 40% = 16% Incentive Fee for Technical Performance Incentive A.
- 

### **Technical Performance Incentive B – Data Rates:**

- Total Schedule Weighting at 40% of Total Target Fee x Technical Performance Incentive B Weighting at 20% = 8% Incentive Fee for Technical Performance Incentive B

### **Technical Performance Incentive C – Circuit Margin:**

- Total Schedule Weighting at 40% of Total Target Fee x Technical Performance Incentive C Weighting at 20% = 8% Incentive Fee for Technical Performance Incentive C

### **Technical Performance Incentive D - Software Functionality:**

- Total Schedule Weighting at 40% of Total Target Fee x Technical Performance Incentive D Weighting at 20% = 8% Incentive Fee for Technical Performance Incentive D

## **B. Delivery Incentives**

### **Delivery Incentive A:**

- 26% Target Incentive Fee for FUs

The following formulas are provided as examples to give the Offeror insight into the positive incentive fee calculation at .14% per day:

- Positive incentive fee of 9% for delivery that is 65 business days early = 35% incentive fee for FU Sets
- Positive incentive fee of 4.15% for delivery at 30 business days early = 30.15% incentive fee for FU Sets
- Positive incentive fee of 2.08% for delivery 15 business days early = 28.08% incentive fee for FU Sets
- Positive incentive fee of 0.14% for delivery 1 business day early = 26.14% FU incentive fee

The following formulas are provided as examples to give the Offeror insight into the negative incentive fee calculation at .17% per business day:

- Negative incentive fee of 1.7% for late delivery at 10 business days = 24.3% incentive fee for FU Sets
- Negative incentive fee of 8.5% for late delivery at 50 business days = 17.5% incentive fee for FU Sets

- Negative incentive fee of 20.6% for late delivery at 119 business days = 5.4% incentive fee for FU Sets
- Negative incentive fee of 20.8% for late delivery exactly at 120 business days = 5.2% incentive fee for FU Sets
- Negative incentive fee of 26% for late delivery greater than 120 business days = 0% Minimum incentive fee for FU Sets

**Delivery Incentive B:**

- 9% Target Incentive Fee for FEUs

The following formulas are provided as examples to give the Offeror insight into the positive incentive fee calculation at 0.05% per business day:

- Positive incentive fee of 3.25% for delivery that is 65 business days early = 12.25% incentive fee for FEU Sets
- Positive incentive fee of 1.5% for delivery at 30 business days early = 10.5% incentive fee for FEU Sets
- Positive incentive fee of 0.75% for delivery 15 business days early = 9.75% incentive fee for FEU Sets
- Positive incentive fee of 0.05% for delivery 1 business day early = 9.05% FEU incentive fee

The following formulas are provided as examples to give the Offeror insight into the negative incentive fee calculation at 0.06% per business day:

- Negative incentive fee of 0.6% for late delivery at 10 business days = 8.4% incentive fee for FEU Sets
- Negative incentive fee of 3% for late delivery at 50 business days = 6% incentive fee for FEU Sets
- Negative incentive fee of 7.14% for late delivery at 119 business days = 1.86% incentive fee for FEU Sets
- Negative incentive fee of 7.2% for late delivery exactly at 120 business days = 1.8 % incentive fee for FEU Sets
- Negative incentive fee of 8.75% for late delivery greater than 120 business days = 0% Minimum incentive fee for FEU Sets

**Point of Contact and Audit Data (POC Government and Contractor Audit)**

The purpose of this worksheet is to provide NASA with contact information for the Defense Contract Management Agency (DCMA), the Defense Contract Audit Agency (DCAA), and the Offeror. The worksheet shall be provided to NASA by both the prime contractor and all major subcontractors. Contact information shall be current and includes names, addresses, telephone numbers and e-mail addresses.

In addition, the Offeror shall provide DCAA Audit Report Numbers and Dates for the “Other Required Information”, as well as the status of the Offeror’s systems listed in this worksheet. The contractor shall provide information on the status of the Accounting System and its adequacy. An adequate accounting system is necessary for the award of cost type contracts [FAR 16.104(i) and 16.301-3(a)(3)] The status of the Billing System, Estimating System, Compensation System and Purchasing System’s statuses shall also be provided. If any system is inadequate, the offeror shall explain the cause, current status and plan for remedy. For the most current Forward Pricing Rate Agreement or Forward Pricing Rate Recommendation, the

Offeror shall provide copies of the documents with the proposal submission. Additionally, the Offeror shall provide a narrative description of the status of all Cost Accounting Standard (CAS) non-compliances, Disclosure Statement (DS) issues, and system deficiencies.

#### **L.19 Other Proposal Requirements (Volume V)**

Additional information is required to fully understand the Offeror's proposal. The information shall be divided into the following major sections:

##### **A. Organizational Conflict of Interest Information**

In accordance with FAR Subpart 9.5, Organizational and Consultant Conflicts of Interest, the Offeror and proposal will be reviewed for existing and potential Organizational Conflicts of Interest (OCI) issues in relation to this procurement. The Offeror shall submit the information required by DRD-C2V2-01, *Organizational Conflicts of Interest (OCI) Avoidance Plan*.

#### **L.20 Model Contract (VOLUME VI)**

##### **A. Instructions for Preparation of the Model Contract**

Offerors shall also submit the model contract per the instructions below with their proposal.

<b>Contract Section</b>	<b>Areas of Model Contract Offerors are Required to Complete</b>
Section A	Complete, sign, and date the SF 33
Section B	Insert information in B.2
Section C	Insert information in 2.6
Section D	None
Section E	None
Section F	Insert information in F.4, F.5 and F.6
Section G	Insert Information in G.2
Section H	Insert Information in H.3
Section I	Insert Information in Section I.5
Section J	Insert information in Section J.10; Offerors will submit the required documents
Section K	Fill in the appropriate representatives and certifications

(END OF SECTION)

### Attachment L-1 Key Personnel Resume

Complete one form for each proposed Key Person. The resume shall not exceed three pages.

1. Name
2. Education
  - a. Degrees, dates, majors, schools
  - b. Other education or training and dates
  - c. Licenses, certifications, or professional designations (locations)
3. Proposed assignment: title and organizational element
4. Current position and beginning date
5. Current significant responsibilities or projects
6. Previous positions (last ten years)
  - a. Company and period of employment
  - b. Significant experience
  - c. Specific projects
  - d. Immediate supervisor's name, address, telephone number and employer. (Indicate if supervisor may be contacted)
7. Professional activities and achievements
  - a. Awards
  - b. Significant publications
  - c. Professional societies
  - d. Significant achievements
8. Unique qualifications. Summarize any relevant unique experience, education, or personal characteristics that may not be evident from the above information.
9. Evidence of commitment to the program.
10. Professional References (Provide three professional references which may include supervisors listed in item 6. However, references from the Offeror shall not be included.)

Attachment L-2 Past Performance Questionnaire

Complete one set of letters and forms for each Past Performance reference. Additional space or blank sheets may be added to answer any question.

Transmittal Letter to Accompany Present/Past Performance Questionnaire
--

FROM:

SUBJECT: Present/Past Performance Questionnaire for Contract(s):

We are currently responding to NASA Johnson Space Center's (JSC's) Request for Proposal (RFP). This RFP requires Offerors to identify customers and solicit their response regarding our performance.

We are providing present and past performance data to NASA JSC relating to our performance on contract \_\_\_\_\_ (contract name/number). The RFP instructs that we provide our customers with the attached questionnaire and requests that you provide requested data and submit it by \_\_\_\_\_ directly to:

C2V2 SLPT  
Attn: BG/Kirby L. Condron, Contracting Officer  
NASA Johnson Space Center  
2101 NASA Parkway  
Houston, TX 77058  
kirby.l.condron@nasa.gov

You are also encouraged to email the questionnaire(s).

The information contained in the completed Past Performance Questionnaire is considered sensitive and cannot be released to us, the Offeror. If you have any questions about the acquisition or the attached questionnaire, your questions must be directed back to the JSC point of contact identified above. Thank you for your timely assistance.

Sincerely,

(Company Official)

Offeror Identification

Please provide the following information:

1. Contractor Information

Company:

Division:

Mailing Address:

2. Contract Number:

3. Contract Type:

4. Product/Service Description:

5. Contract Award Date:

6. Period of Performance (basic and any options):

7. During this contract period of performance, this firm was the:

- ☐ Prime Contractor
- ☐ Significant Subcontractor
- ☐ Team Member
- ☐ Other (please describe): \_\_\_\_\_

What percentage of the Total Contract Value for this contract did the firm perform and what is the Total Contract Value?

Percentage of work performed by contractor \_\_\_\_\_

Total contract value \_\_\_\_\_

8. Does a corporate or ownership relationship exist between the contractor being evaluated and your organization?

- ☐ No
- ☐ Yes – If yes, please describe the relationship: \_\_\_\_\_

9. Unusual contract features or conditions:

### Past Performance Evaluation

Based on your knowledge of the contract identified above, please provide your assessment of how well the contractor performed on each of the following questions. It is very important to keep in mind that only performance in the past 3 years is relevant.

Please rate the contractor as described below in the following technical, schedule, cost, and general areas. Please give a short narrative as to why you chose the adjective you did, especially for those answers that are other than “satisfactory.”

Excellent (E) – Of exceptional merit, exemplary performance in a timely, efficient and economical manner, very minor (if any) deficiencies with no adverse effect on overall performance.

Very Good (VG) – Very effective performance, fully responsive to contract requirements; contract requirements accomplished in a timely, efficient, and economical manner for the most part, only minor deficiencies.

Good (G) – Effective performance, fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.

Satisfactory (S) – Meets or slightly exceeds minimum acceptable standards, adequate results; reportable deficiencies with identifiable, but not substantial, effects on overall performance.

Poor/Unsatisfactory (P) – Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas which adversely affect overall performance.

Not Applicable – Contractor not required to provide the service or product indicated.



## TECHNICAL PERFORMANCE

1. Overall performance in planning and controlling the program:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

2. Overall quality of technical services and support:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

3. Compliance with technical requirements and performance standards in providing safety and mission assurance support and services:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

4. Insight in understanding customer requirements and priorities:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

5. Initiative in identifying and resolving unforeseen technical and schedule problems (causes, impacts, and resolutions):

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory

- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

6. Surveillance, and management of major/critical subcontractors:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

7. Contractor's ability to correct performance deficiencies:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

8. Ability to use metrics and other tools to accurately measure and track program:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

9. Record in demonstrating a thorough understanding of the nature of the work required and the disciplines required to accomplish them:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

10. Record in identifying and mitigating risks:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

11. Effectiveness of technical training program:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

12. Other particular strong/weak points of contractor's technical performance.

### SCHEDULE PERFORMANCE

1. Ability to provide a qualified workforce to fulfill schedule requirements:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

2. Content, accuracy, and timeliness of technical reports:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

3. Adherence to task schedules:

- ☐ Excellent
- ☐ Very Good
- ☐ Good

- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

4. Timeliness and accuracy of cost and business reports:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

5. Record in completing technical tasks/milestones, deliverables within established schedules:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

## CONTRACT MANAGEMENT AND COST PERFORMANCE

1. Contract Value:

	Initial Value	Current/Final Value
Estimated Cost	\$ _____	\$ _____
Fee/Fee	\$ _____	\$ _____
Total Value	\$ _____	\$ _____

Briefly describe any change(s) from original contract value:

2. Adherence to estimated costs and contract cost targets:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

3. Was there a cost overrun/under-run?

☐ No

☐ Yes – If yes, what was the magnitude? Please explain:

4. Does the contract have ceilings rates?

☐ No

☐ Yes – If yes, what are the rates?

Has the contractor exceeded the rates?

☐ No

☐ Yes – If yes, please explain:

5. Ability to effectively plan efforts, provide realistic cost and schedule estimates, etc:

☐ Excellent

☐ Very Good

☐ Good

☐ Satisfactory

☐ Unsatisfactory/Poor

☐ Not Applicable

Comments: \_\_\_\_\_

6. Ability to forecast and control costs:

☐ Excellent

☐ Very Good

☐ Good

☐ Satisfactory

☐ Unsatisfactory/Poor

☐ Not Applicable

Comments: \_\_\_\_\_

7. Ability to submit accurately and timely financial reports and credible forecasts of future resource requirements:

☐ Excellent

☐ Very Good

☐ Good

☐ Satisfactory

☐ Unsatisfactory/Poor

☐ Not Applicable

Comments: \_\_\_\_\_

8. Rate the degree of monitoring/guidance required in contract administration:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

9. Contract change order management (discuss contractor commitment to negotiate and implement contract changes in a timely manner):

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

10. Rate the contractor's record in effectively selecting and managing subcontractors:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

11. If an award/incentive fee type contract, percent of available fee earned? \_\_\_\_\_%

12. Has the contract been partially or completely terminated for default or convenience?

- ☐ No
- ☐ Yes – If yes, please explain the reason for termination (i.e., inability to meet cost or delivery schedules, performance, etc:

13. Rate the contractor's history of reasonable and cooperative behavior and commitment to customer satisfaction?

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory

- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

14. Rate the contractor's record in reacting quickly and adjusting staffing levels and make-up to meet changing requirements:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

15. Performance in managing problems and implementing corrective actions:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

16. Record in managing multiple and diverse projects/tasks from planning through execution phases:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

17. Record in managing complex projects at multiple, geographically dispersed sites:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

18. Record in adhering to or ability to meet goals for Small Business Subcontracting Goals:

- ☐ Excellent
- ☐ Very Good

- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

19. Overall effectiveness in communications, including lines of authority and reporting relationships

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

#### GENERAL

1. Approximately how many people were/are employed under this contract?

\_\_\_\_\_

2. Rate the contractor's record in identifying key positions, filling these positions with individuals with required skills, and providing back-ups:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

3. What has been the key personnel turnover rate for this contract? \_\_\_\_\_

4. Rate the contractor's record in recruiting, maintaining, and managing a workforce with the required skill mix:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

5. Did any accidents or industrial illnesses resulting in lost time occur under this contract?

☐ No



☐ Yes – If yes, please provide details:

6. Rate the contractor's compliance with export control requirements:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

7. Rate the contractor's record in complying with safety, health, and environmental procedures/requirements:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

8. Record in establishing and maintaining an effective quality assurance program and meeting quality improvement requirements:

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Satisfactory
- ☐ Unsatisfactory/Poor
- ☐ Not Applicable

Comments: \_\_\_\_\_

9. Would you select this contractor again?

☐ No

☐ Yes

Comments:

10. In what areas below do you feel the contractor is strong?

- ☐ Program/Project Management
- ☐ Risk Identification and Mitigation
- ☐ Attracting and Retaining Qualified Personnel
- ☐ Communication

- ☐ Technical Performance
- ☐ Technical Innovation
- ☐ Small Business Utilization
- ☐ Safety and Environmental Performance
- ☐ Cost Performance
- ☐ Response to Change

11. In what areas below do you feel the contractor is weak?

- ☐ Program/Project Management
- ☐ Risk Identification and Mitigation
- ☐ Attracting and Retaining Qualified Personnel
- ☐ Communication
- ☐ Technical Performance
- ☐ Technical Innovation
- ☐ Small Business Utilization
- ☐ Safety and Environmental Performance
- ☐ Cost Performance
- ☐ Response to Change

#### RESPONDENT INFORMATION

1. Name of evaluator:

\_\_\_\_\_

2. Position title:

\_\_\_\_\_

3. Agency/Company

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Facsimile Number: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

4. Your role in the program/contract:

5. Length of involvement in this program/contract: \_\_\_\_\_

6. Date questionnaire completed: \_\_\_\_\_

Attachment L-3 Past Performance Consent Letter

SUBCONTRACTOR/TEAMING PARTNER CONSENT FORM FOR THE RELEASE OF  
PAST AND PRESENT PERFORMANCE INFORMATION TO THE PRIME  
CONTRACTOR

Past performance information concerning subcontractors and teaming partners cannot be disclosed to a private party without the subcontractor's or teaming partner's consent. Because a prime contractor is a private party, the Government will need that consent before disclosing subcontractor/teaming partner past and present performance information to the prime during exchanges. In an effort to assist the Government in assessing your past performance relevancy and confidence, we request that the following consent form be completed by the major subcontractors/teaming partners identified in your proposal. The completed consent forms should be submitted as part of your Past Performance Volume (or Proposal). (Note: Section L should specify if past performance is to be submitted as a separate proposal volume.)

SAMPLE

Dear (Contracting Officer)

We are currently participating as a (subcontractor/teaming partner) with (prime contractor or name of entity providing proposal) in responding to the NASA, Johnson Space Center, Request for Proposal (solicitation number) for the (program title or description of effort).

We understand that the Government is placing increased emphasis on past performance in order to obtain best value in source selections. In order to facilitate the performance confidence assessment process, we are signing this consent form to allow you to discuss our past and present performance information with the prime contractor during the source selection process.

\_\_\_\_\_

\_\_\_\_\_  
(Signature and Title of individual who has the authority to sign for and legally bind the company)

Company Name:

Address:

#### Attachment L-4 Technology Readiness Level (TRL) Instructions

Technology Readiness Levels are a set of nine graded definitions/descriptions of stages of technology maturity. They were originated by the National Aeronautics and Space Administration and adapted by the DOD for use in its acquisition system. A copy of the definitions is provided below for convenience.

<b>Technology Readiness Level</b>	<b>Description</b>
1. Basic principles observed and reported.	Lowest level of technology readiness. Scientific research begins to be translated into applied research and development. Examples might include paper studies of a technology's basic properties.
2. Technology concept and/or application formulated.	Invention begins. Once basic principles are observed, practical applications can be invented. Applications are speculative and there may be no proof or detailed analysis to support the assumptions. Examples are limited to analytic studies.
3. Analytical and experimental critical function and/or characteristic proof of concept.	Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
4. Component and/or breadboard validation in laboratory environment.	Basic technological components are integrated to establish that they will work together. This is relatively "low fidelity" compared to the eventual system. Examples include integration of "ad hoc" hardware in the laboratory.
5. Component and/or breadboard validation in relevant environment.	Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in a simulated environment. Examples include "high fidelity" laboratory integration of components.
6. System/subsystem model or prototype demonstration in a relevant environment.	Representative model or prototype system, which is well beyond that of TRL 5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness. Examples include testing a prototype in a high-fidelity laboratory environment or in simulated operational environment.
7. System prototype demonstration in an operational environment.	Prototype near, or at, planned operational system. Represents a major step up from TRL 6, requiring demonstration of an actual system prototype in an operational environment such as an aircraft, vehicle, or space. Examples include testing the prototype in a test bed aircraft.

8. Actual system completed and qualified through test and demonstration.	Technology has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development. Examples include developmental test and evaluation of the system in its intended weapon system to determine if it meets design specifications.
9. Actual system proven through successful mission operations.	Actual application of the technology in its final form and under mission conditions, such as those encountered in operational test and evaluation. Examples include using the system under operational mission conditions.

#### CLARIFYING DEFINITIONS:

- **BREADBOARD:** Integrated components that provide a representation of a system/subsystem and which can be used to determine concept feasibility and to develop technical data. Typically configured for laboratory use to demonstrate the technical principles of immediate interest. May resemble final system/subsystem in function only.
- **HIGH FIDELITY:** Addresses form, fit and function. High fidelity laboratory environment would involve testing with equipment that can simulate and validate all system specifications within a laboratory setting.
- **LOW FIDELITY:** A representative of the component or system that has limited ability to provide anything but first order information about the end product. Low fidelity assessments are used to provide trend analysis.
- **MODEL:** A reduced scale, functional form of a system, near or at operational specification. Models will be sufficiently hardened to allow demonstration of the technical and operational capabilities required of the final system.
- **OPERATIONAL ENVIRONMENT:** Environment that addresses all of the operational requirements and specifications required of the final system to include platform/packaging.
- **PROTOTYPE:** The first early representation of the system which offers the expected functionality and performance expected of the final implementation. Prototypes will be sufficiently hardened to allow demonstration of the technical and operational capabilities required of the final system.
- **RELEVANT ENVIRONMENT:** Testing environment that simulates the key aspects of the operational environment.
- **SIMULATED OPERATIONAL ENVIRONMENTAL:** Environment that can simulate all of the operational requirements and specifications required of the final system or a simulated environment that allows for testing of a virtual prototype to determine whether it meets the operational requirements and specifications of the final system.

Attachments L-5, L-6 and L-7 Other Cost Templates

See Other Templates Excel Spreadsheets

## SECTION M: EVALUATION FACTORS FOR AWARD

### M.1 LIST OF CLAUSES INCORPORATED BY REFERENCE

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

FAR 52.217-4 Evaluation of Options Exercised at Time of Contract Award (JUN 1998)
FAR 52.217-5 Evaluation of Options (JUL 1990)

#### NASA FAR SUPPLEMENT (48 CFR CHAPTER 18 CLAUSES (48 CFR CHAPTER 1)

No clauses incorporated by reference

### M.2 Award Without Discussions

As provided for in FAR 52.215-1, Instructions to Offerors – Competitive Acquisitions,” the Government intends to evaluate proposals and award a contract without discussions with Offerors (except for clarifications as described in FAR 15.306(a)). Therefore, the Offeror’s initial proposal should contain the Offeror’s best terms. The Government reserves the right to conduct discussion if the Contract Officer later determines them to be necessary.

(End of Provision)

### M.3 Solicitation Requirements, Terms, and Conditions

Offerors are required to meet all solicitation requirements, such as terms and conditions, representations and certifications, and technical requirements, in addition to those identified as areas, factors, and sub-factors to be eligible for award. Failure to comply with solicitation requirements may result in an Offeror being removed from consideration for award. Any exceptions to solicitation requirements must be fully explained or justified.

(End of Provision)

### M.4 Proposal Evaluation Table of Contents

This section provides a detailed description of how proposals will be evaluated. It is organized as follows:

Paragraph	Paragraph Title
M.4	Proposal Evaluation Table of Contents
M.5	Introduction
M.6	Proposal Arrangement, Page Limitations, Copies, and Due Dates
M.7	Limited Tradeoff (LTO) Proposal Evaluation Instructions
M.8	Other Proposal Requirements
M.9	Model Contract

## M.5 Introduction

This acquisition is being conducted as a full and open competition. Proposal evaluations will be conducted in accordance with FAR 15.3, "Source Selection," and NASA FAR Supplement (NFS) 1815.3, same subject. The Offeror's proposal will be evaluated by a SLPT in accordance with applicable regulations which include the FAR and the NASA FAR Supplement.

The Offeror's proposal will be evaluated for a demonstration of the Offeror's competence and capability to successfully complete the requirements specified in the Common Communications for Visiting Vehicles for the International Space Station Statement of Work. Generally, the proposal shall:

- (a) Demonstrate understanding of the overall and specific requirements of the proposed contract;
- (b) Convey the company's capabilities for transforming understanding into accomplishment;
- (c) Provide in detail, the plans and methods for so doing; and
- (d) Provide, as requested below, the price associated with so doing.

For a more complete understanding of this part of Section M, refer to Section L. The evaluation criteria in this part of Section M are directly related to the instructions set forth in Section L.

## M.6 Proposal Arrangement, Page Limitations, Copies, and Due Dates

Offerors shall submit their proposals within the page limitations and arranged as set forth in Section L of this RFP. Late proposals will not be accepted. Pages above the pages limits will not be evaluated and will be returned to the Offeror. To the extent of any inconsistency between data provided electronically and proposal hard copies, the hard copy data will be considered to be the intended data.

## M.7 Limited Tradeoff (LTO) Proposal Evaluation

An initial review of proposals will be conducted to determine acceptability of the proposals in accordance with NFS 1815.305-70, *Identification of Unacceptable Proposals*. All unacceptable proposals will be eliminated from further evaluation.

The remaining proposals will be evaluated against the Technical Acceptability requirements. All Technically Acceptable and Potentially Acceptable Offerors will be evaluated against past performance, predefined value characteristics, and cost/price criteria. The SLPT will carry out the evaluation activities and report to the Source Selection Authority (SSA), who is responsible for making the source selection decision. For those Offerors who are determined to be technically acceptable, tradeoffs will be made between predefined value characteristics, past performance, and cost/price. Past performance is more important than the combined value of the predefined value characteristics. The predefined value characteristics are considered of equal value to one another. Past performance and predefined value characteristics, when combined, are significantly more important than cost/price.

The Government will award a contract resulting from this solicitation to the Offeror whose proposal represents the best value after evaluation. The Government will award to the Offeror whose proposal offers the best overall value to the Government that meets all solicitation



requirements and is determined responsible in accordance with FAR 9.104, *Standards*. Further, the Subcontracting Utilization and the OCI information will also be used to determine eligibility.

#### **A. Technical Acceptability**

The baseline shall be evaluated for an adequate response to the provision L.18 “Technical Acceptability”. Technical acceptability will be rated as either “Acceptable”, “Potentially Acceptable”, or “Unacceptable.” ALL Technical Acceptability criteria must be passed to be considered technically acceptable. A proposal is rated “Potentially Acceptable” when after the initial evaluation, the evaluator anticipates additional information that could be provided by an Offeror during discussions that would result in a proposal rating of acceptable. The Offeror will need to revise or further explain its proposal. If, upon review of the new or revised information, the proposal does not meet the government’s requirements, an “Unacceptable” rating may be warranted. Although an Offeror may receive a rating of “Potentially Acceptable,” it does not guarantee that discussions will be held or that the Offeror will automatically be included in the competitive range if discussions are held.

The Offerors proposal will be evaluated on its ability to meet the baseline requirements set forth in Section L of this solicitation. This evaluation will be based on the following:

##### **1. Management Plan**

The proposed Management Plan, in accordance with DRD-C2V2-03, *Management Plan*, will be evaluated for completeness, feasibility, and reasonableness. The Offeror shall demonstrate a Technically Acceptable Management Plan at a level of completeness, feasibility and reasonableness where associated risks do not jeopardize an acceptable level of contract performance.

##### **2. Technical Approach**

The proposed Technical Approach will be evaluated for completeness, feasibility, and reasonableness. The Offeror shall demonstrate a Technically Acceptable Technical Approach at a level of completeness, feasibility and reasonableness where associated risks do not jeopardize an acceptable level of contract performance.

The proposed Technical Approach will be evaluated based on the Offeror’s ability to meet the baseline requirements set forth in Section L, Technical Approach, of this solicitation and the Offeror’s ability to meet the Statement of Work requirements and the requirements set forth in SSP 50930, *ISS C2V2 Prime Item Development Specification (PIDS)*.

##### **3. Schedule Reasonableness and Delivery Date**

The proposed Schedule, in accordance with the schedule listed in Attachments J-4 and J-5 and DRD-C2V2-04, *Contract Schedule*, will be evaluated for completeness, feasibility, and reasonableness. The Offeror shall demonstrate a Technically Acceptable Schedule and Delivery Dates at a level of completeness, feasibility and reasonableness where associated risks do not jeopardize an acceptable level of contract performance.

##### **4. Quality Plan**

The proposed Quality Plan, in accordance with DRD-C2V2-21, *Quality Plan*, will be evaluated for completeness, feasibility, and reasonableness. The Offeror shall demonstrate a Technically Acceptable Quality Plan at a level of completeness, feasibility and reasonableness where associated risks do not jeopardize an acceptable level of contract performance.

## **5. Small Business Utilization**

The evaluation of Small Business Subcontracting and Commitment to the Small Business Program applies to all Offerors, except that Small Businesses are not required to submit a Small Business Subcontracting Plan.

### **(a) Small Business Subcontracting**

(1) The Small Business Subcontracting Plan will be evaluated in terms of the Offeror's proposed subcontracting goals (overall subcontracting goals and individual subcontracting goals by small business category) in comparison to the Contracting Officers assessment of the appropriate subcontracting goals for this procurement in accordance with C2V2-02, Small Business Subcontracting Plan and Reports. The Offeror's Small Business Subcontracting Plan will also be evaluated in terms of meeting the requirements of FAR 19.704, Subcontracting Plan Requirements. The evaluation of the Small Business Subcontracting Plan will be on the basis of total contract value.

(2) Small businesses are not required to submit subcontracting plans. NASA will only evaluate the amount of work proposed to be performed by the small business prime and any small business at the first tier subcontract level. The proposed amount of work to be done by the prime small business and first tier small business subcontractors will be evaluated against the Contracting Officer's assessment of the overall subcontracting goal for this procurement. Individual subcontracting goals by small business categories will not be evaluated for small business prime contractors and their first tier subcontractors.

The Small Business Subcontracting Plan will be evaluated for completeness, feasibility and reasonableness. The Offeror shall demonstrate a Technically Acceptable Small Business Subcontracting Plan at a level of completeness, feasibility and reasonableness where associated risks do not jeopardize an acceptable level of contract performance.

### **(b) Commitment to Small Businesses**

(1) The Government will evaluate the extent to which any work performed by a small business subcontractor(s) is identified as "high technology." NASA also will evaluate the extent of commitment to use the subcontractor(s) (enforceable vs. non-enforceable commitments.)

(2) The Government will evaluate the extent to which the identity of the small business subcontractor is specified in the proposal as well as the extent of the commitment to use small businesses. (For small business Offerors, NASA will evaluate this only if subcontracting opportunities exist.)

(3) The Government will evaluate the Offeror's established or planned procedures and organizational structure for small business outreach, assistance, participation in the Mentor Protégé program, counseling, market research and small business identification, and relevant purchasing procedures. (For large businesses Offerors, this information should conform to its submitted Small Business Subcontracting Plan. For small business Offerors, NASA will evaluate this only if subcontracting opportunities exist.)

The Commitment to Small Businesses will be evaluated for completeness, feasibility and reasonableness. The Offeror shall demonstrate a Technically Acceptable Commitment to Small Business at a level of completeness, feasibility and reasonableness where associated risks do not jeopardize an acceptable level of contract performance.

## **B. Past Performance**

Past Performance indicates how well an Offeror performed on earlier work and can be a significant indicator of how well it can be expected to perform the work at hand. The Offeror's past performance (contract performance and quality performance), including recent experience with its proposed key personnel, will be evaluated by the Streamlined Procurement Team (SLPT).

The Government will use past performance and key personnel information from proposal data required by provisions of Section L, information obtained by the SLPT based on communications with listed references, as well as data independently obtained from other government and commercial sources, such as the NASA Past Performance Database and similar systems of other governmental departments and agencies, Defense Contract Management Agency (DCMA) channels, interviews with client program managers and contracting officers, and other sources known to the Government, including commercial sources. Offerors are to note that, in conducting this assessment, the Government reserves the right to use both data provided by the Offeror and data obtained from other sources. The Government will consider the number and severity of problems, the effectiveness of corrective actions taken and the overall record of past performance. It shall also consider the Offeror's record for adherence to contract schedules, cost control, history of commitment to customer satisfaction, and history of commitment to subcontracting with small, small disadvantaged, HUBZone, woman owned, and veteran owned businesses.

The past performance evaluation and key personnel evaluation will assess the degree of confidence the government has in the Offeror's ability to fulfill the solicitation requirements (for the contract and seed project) while meeting schedule, budget, and performance quality constraints. The past performance evaluation considers each Offeror's demonstrated record of performance in supplying the requirements of this solicitation that meet the user's needs. The Offeror's past performance record will be examined for recent and relevant past performance to determine its ability to perform the required work.

**Recency:** Contracts with more recent performance (1-3 years from date of the solicitation) will be considered to be more relevant than those with more distant performance (more than 3 years from date of the solicitation), assuming all other considerations to be equal. If the contract is still ongoing, it must have a documented performance history. The Government will not consider performance on a newly awarded contract that has no documented performance history (in other words, projects that are less than six months under contract or less than 50% complete).

**Relevancy:** For purposes of this procurement, relevancy will be assessed using the following definitions:

Very Relevant	Present/past performance effort involved essentially the same magnitude of effort and complexities this solicitation requires.
Relevant	Present/past performance effort involved much of the magnitude of effort and complexities this solicitation requires.
Somewhat Relevant	Present/past performance contractual effort involved some of the magnitude of effort and complexities than this solicitation requires.
Not Relevant	Present/past performance effort did not involve any of the magnitude of effort and complexities this solicitation requires.

**Past Performance Confidence Rating:** A performance confidence rating will be assessed at the overall factor level for Past Performance after evaluating aspects of the Offeror's recent and relevant past performance.

Offeror Performance Confidence Assessment Ratings will be assigned as follows:

**Very High Level of Confidence:** The Offeror's relevant past performance is of exceptional merit and is very highly pertinent to this acquisition; indicating exemplary performance in a timely, efficient, and economical manner; very minor (if any) problems with no adverse effect on overall performance. Based on the Offeror's performance record, there is a very high level of confidence that the Offeror will successfully perform the required effort.

**High Level of Confidence:** The Offeror's relevant past performance is highly pertinent to this acquisition; demonstrating very effective performance that would be fully responsive to contract requirements with contract requirements accomplished in a timely, efficient, and economical manner for the most part with only minor problems with little identifiable effect on overall performance. Based on the Offeror's performance record, there is a high level of confidence that the Offeror will successfully perform the required effort.

**Moderate Level of Confidence:** The Offeror's relevant past performance is pertinent to this acquisition, and it demonstrates effective performance; fully responsive to contract requirements; reportable problems, but with little identifiable effect on overall performance. Based on the Offeror's performance record, there is a moderate level of confidence that the Offeror will successfully perform the required effort.

**Low Level of Confidence:** The Offeror's relevant past performance is at least somewhat pertinent to this acquisition, and it meets or slightly exceeds minimum acceptable standards; adequate results; reportable problems with identifiable, but not substantial, effects on overall performance. Based on the Offeror's performance record, there is a low level of confidence that the Offeror will successfully perform the required effort. Changes to the Offeror's existing processes may be necessary in order to achieve contract requirements.

**Very Low Level of Confidence:** The Offeror's relevant past performance does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; problems in one or more areas which adversely affect overall performance. Based on the Offeror's performance record, there is a very low level of confidence that the Offeror will successfully perform the required effort.

**Neutral:** In the case of an Offeror without a record of relevant past performance or for whom information on past performance is not available, the Offeror may not be evaluated favorably or unfavorably on past performance [see FAR 15.305(a) (2) (ii) and (iv)].

More recent and more relevant performance will receive greater consideration in the performance confidence assessment than less recent and less relevant performance. Relevancy will be based on the size, scope and complexity of the projects being evaluated for past performance. Contracts that exhibit all specific trades/type of work will be considered more relevant than contracts limited to specific trades only.

Specific types and scopes of work that will be evaluated as relevant may be listed.

### **C. Predefined Value Characteristics (VCs)**

Only items specifically proposed as Predefined Value Characteristics will be evaluated as such. The following Predefined Value Characteristics are applicable to this procurement and will be evaluated for reasonableness and feasibility and rated as “Significant Value Added”, “Value Added”, and “No Value Added”:

**Value Characteristic A (VCA)** – Technology Readiness Level (TRL) greater than or equal to 6 (See Attachment L-5 for further description)

**Value Characteristic B (VCB)** – Size, weight, or power usage less than the baseline requirements in SSP 50930, ISS C2V2 Prime Item Development Specification (PIDS).

**Value Characteristic C (VCC)** – An information data rate greater than baseline requirement in SSP 50930, ISS C2V2 Prime Item Development Specification (PIDS).

**Value Characteristic D (VCD)** – Major subassemblies (e.g., antenna, receiver, transmitter, transceiver, transponder) have been purchased before and are readily available to commercial, industrial, or military customers.

**Value Characteristic E (VCE)** – Delivery dates are earlier than requirements per Attachment J-5.

Value added will be assessed in the following manner:

**Significant Value Added** – The Offeror’s proposed response to the Predefined Value Characteristic is appropriate for/applies to the value characteristic and would substantially improve performance and/or substantially enhance overall contract objectives.

**Value Added** – The Offeror’s proposed response to the Predefined Value Characteristic is appropriate for/applies to the value characteristic and would improve performance and/or enhance overall contract objectives.

**No Value Added** – The Offeror’s proposed response to the Predefined Value Characteristic is not appropriate for or does not apply to the Value Characteristic, and/or the Offeror’s response to the Predefined Value Characteristic would have little or no effect on performance and/or enhance overall contract objectives.

**D. Cost/Price**

Cost/Price Factor -To ensure that the final agreed-to prices are fair and reasonable, the Government will perform price and cost analysis, in accordance with FAR 15.305 - Proposal Evaluation, FAR 15.404 - Proposal Analysis, and NASA FAR Supplement (NFS) 1815.305 - Proposal Evaluation.

The Government will perform a cost realism analysis on each proposal at the cost element level inclusive of all costs for labor, non-labor resources, indirect rates and fee. This evaluation of the cost factors will result in a probable cost which may differ from the proposed cost and reflects the Government's best estimate of the cost of a contract that is most likely to result from the Offeror's proposal.

Fee for probable cost, will use the target fee for delivery and technical performance, as these reflect the most probable outcome for performance. For cost incentive fee, the fee will be derived by applying the probable cost to the cost incentive parameters proposed in Section J-10, V Cost Incentive.

**Price and Probable Costs for Selection Purposes**

The results of the Government's cost and price evaluation will be presented to the Source Selection Authority (SSA) for consideration in making the source selection. Price for evaluation will be the sum of the Basic, Option A, and Option B prices. Total probable cost will be the sum of the Basic, Option A, and Option B probable costs. The probable cost for the contract period of performance will be considered for selection purposes in accordance with FAR 15-404.

(End of provision)

**E. Tradeoff Process**

1. For those Offerors who are determined to be technically acceptable, tradeoffs will be made between predefined value characteristics, past performance, and cost/price. Past performance is more important than the combined value of the predefined value characteristics. The predefined value characteristics are considered of equal value to one another. Past performance and predefined value characteristics, when combined, are significantly more important than cost/price.
2. If all offers are of approximately equal merit, award will be made to the Offeror with the lowest most probable cost or price.
3. The Government will consider awarding to an Offeror with higher merit if the difference in probable cost/price is commensurate with added value.
4. The Government will consider making award to an Offeror whose offer has lower merit if the probable cost/price differential between it and other offers warrant doing so.

## **M.8 Other Proposal Requirements**

### **A. Organizational Conflict of Interest**

The Government will perform an analysis to ensure an Organizational Conflict of Interest issue that cannot be mitigated does not exist. The OCI information will be assessed to verify the Offeror is eligible for award. If it appears an OCI issue does exist that the Offeror's plan failed to mitigate, the government must notify the contractor, provide the reasons therefore, and allow the contractor a reasonable opportunity to respond. The SLPT will make the final determination if the OCI issue exists and can be mitigated. Offerors are advised that evidence of non-compliance with Provision L.19 (a), Organizational Conflict of Interest (OCI) Information may result in elimination of the Offeror from competition.

## **M.9 Model Contract**

The model contract will be evaluated to ensure that it was properly signed by a person authorized to commit the Offeror, to ensure full completion of all fill-ins, and to establish that the model contract fully and accurately captures content set forth in the Offeror's proposal.

(End of Provision)

(END OF SECTION)